Access DB# 43041

SEARCH REQUEST FORM

Scientific and Technical Information Center

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Requester's Full Name: Rao Uppu Examiner #: 78295 Date: 5/9/01
Art Unit: 1624 Phone Number 308 3951 Serial Number: 09/736,066
Mail Box and Bldg/Room Location: CM1 4D14 Results Format Preferred (circle): PAPER DISK E-MAIL

4E12

If more than one search is submitted, please prioritize searches in order of need.

****

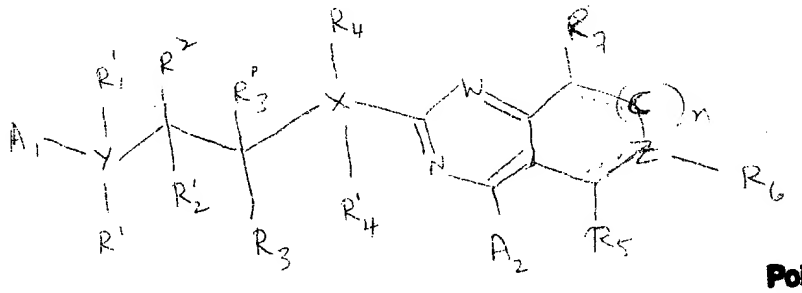
Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Bicyclic inhibitors of glycogen Synthase kinase

Inventors (please provide full names): Nuss et al

Earliest Priority Filing Date: _____

***For Sequence Searches Only* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.**



ASAP

12 C 14 N=1
Elected
W=Z=N

Point of Contact:
Susan Hanley
Technical Info. Specialist
CM1 12C14 Tel: 305-4053

Copy of the claims enclosed

1B 1B, ABS, HITSTR, 1ANS/PAGE

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Searcher: Hawley
Searcher Phone #: _____
Searcher Location: _____
Date Searcher Picked Up: 5/18
Date Completed: 5/22
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Online Time: _____

Type of Search

NA Sequence (#) _____
AA Sequence (#) _____
Structure (#) 1
Bibliographic _____
Litigation _____
Fulltext _____
Patent Family _____
Other _____

Vendors and cost where applicable

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Dr.Link _____
Lexis/Nexis _____
Sequence Systems _____
WWW/Internet _____
Other (specify) _____

PTO-1590 (1-2000)

=> d bib abs hitstr 18 1

L8 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2001 ACS
AN 1999:811233 HCAPLUS
DN 132:64265
TI Preparation of aminopyrimidines and -pyridines as glycogen synthase kinase 3 inhibitors
IN Nuss, John M.; Harrison, Stephen D.; Ring, David B.; Boyce, Rustum S.; Brown, Sean P.; Goff, Dane; Johnson, Kirk; Pfister, Keith B.; Ramurthy, Savithry; Renhowe, Paul A.; Seely, Lynn; Subramanian, Sharadha; Wagman, Allan S.; Zhou, Xiaohui A.
PA Chiron Corporation, USA
SO PCT Int. Appl., 262 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9965897	A1	19991223	WO 1999-US13809	19990618
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	RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
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	EP 1087963	A1	20010404	EP 1999-933522	19990618
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
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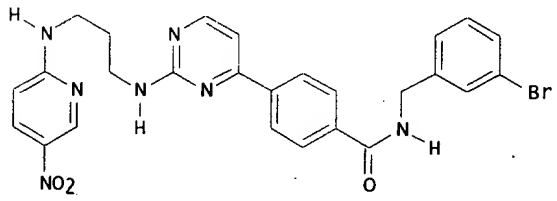
OS MARPAT 132:64265
GI



II

AB RZCR2R12CR3R13Z1R5 [I; R = (un)substituted (hetero)aryl; Z = O, NR1, CR1R11; Z1 = O, NR4, CR4R14; R1-R4 = H, OH, NH2, alkyl, alkoxy, etc.; R5 = (un)substituted 2-pyridyl or -pyrimidyl; R11-R14 = H or alkyl] were prepd. Thus, 2-chloro-5-nitropyridine was aminated by H2N(CH2)3NH2 and the product N-acylated by benzotriazolecarboxamidinium tosylate to give the alkylguanidine which was cyclocondensed with resin-bound 4-(MeCO)C6H4CONHCH2C6H4Br-3 and Cs2CO3 to give, after resin cleavage, title compd. II. Data for biol. activity of I were given.

IT **252916-90-8P 252936-24-6P 252936-29-1P 252936-32-6P 252938-27-5P 252938-29-7P**
RL: BAC (Biological activity or effector, except adverse); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of aminopyrimidines and -pyridines as glycogen synthase kinase 3 inhibitors)

RN 252916-90-8 HCAPLUS
CN 2,5-Pyrrolidinedione, 1-[2-[[2-[(6-amino-5-nitro-2-pyridinyl)amino]ethyl]amino]-4-(2,4-dichlorophenyl)-5-pyrimidinyl]- (9CI) (CA INDEX NAME)

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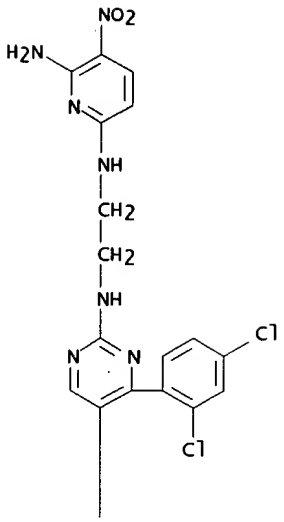

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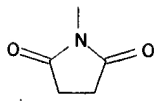

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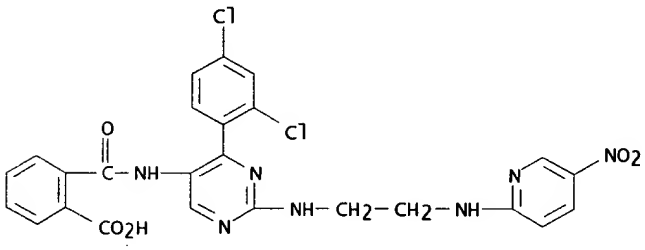

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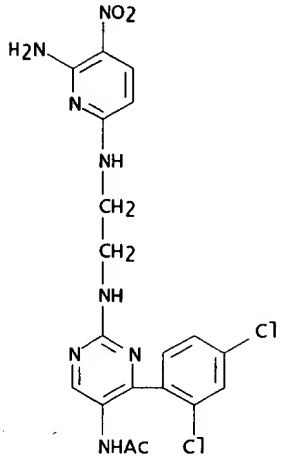

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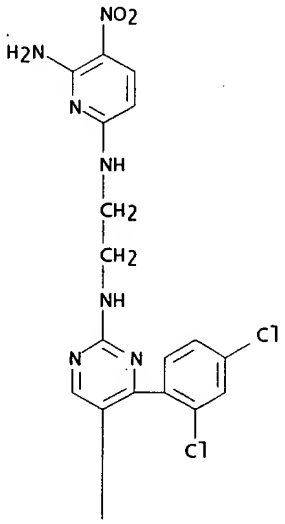
PAGE 1-A



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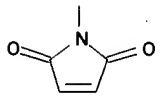

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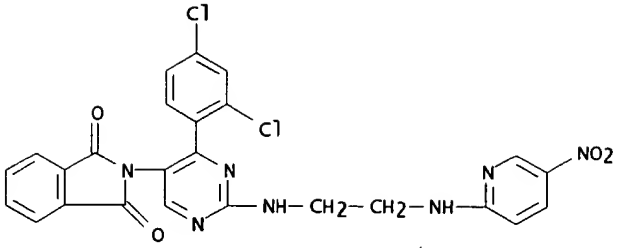
CN 1H-Isoindole-1,3(2H)-dione, 2-[4-(2,4-dichlorophenyl)-2-[[2-[(5-nitro-2-pyridinyl)amino]ethyl]amino]-5-pyrimidinyl]- (9CI) (CA INDEX NAME)



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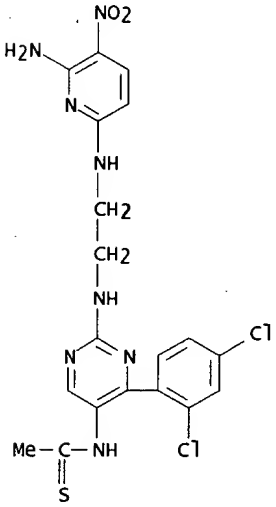

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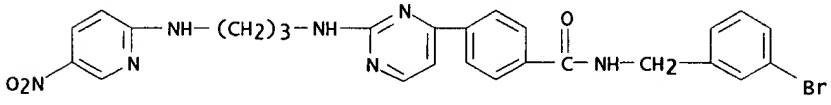
252942-43-1P
RL: BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of aminopyrimidines and -pyridines as glycogen synthase kinase 3 inhibitors)

RN 252904-09-9 HCAPLUS
CN Benzamide, N-[(3-bromophenyl)methyl]-4-[2-[[3-[(5-nitro-2-pyridinyl)amino]propyl]amino]-4-pyrimidinyl]- (9CI) (CA INDEX NAME)



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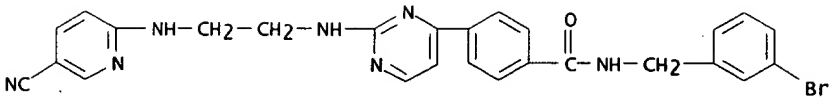
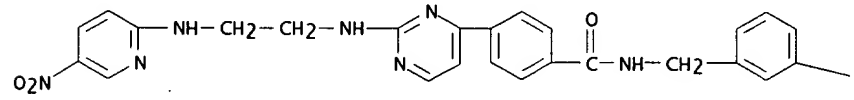


RN 252904-13-5 HCAPLUS
CN Benzamide, N-[(3-methoxyphenyl)methyl]-4-[2-[[2-[(5-nitro-2-pyridinyl)amino]ethyl]amino]-4-pyrimidinyl]- (9CI) (CA INDEX NAME)

PAGE 1-A



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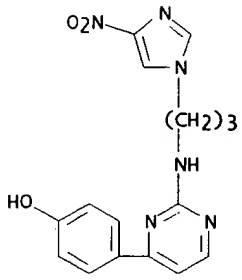

RN 252904-15-7 HCAPLUS
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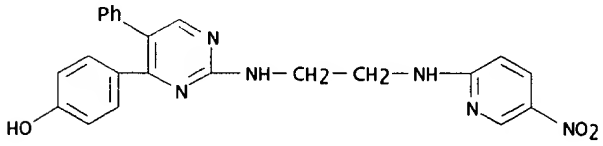

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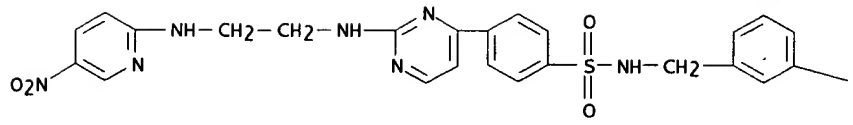
PAGE 1-A



PAGE 1-B

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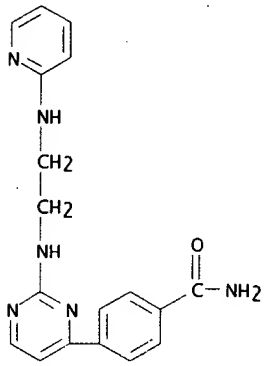

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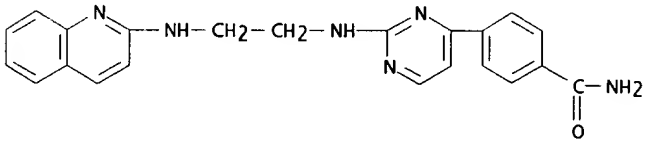

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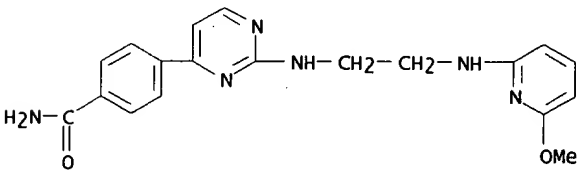

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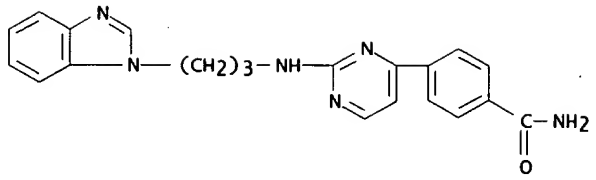

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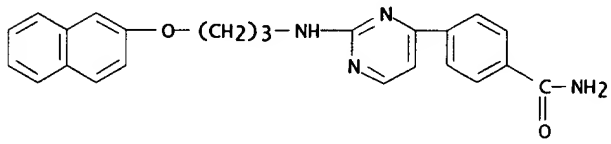
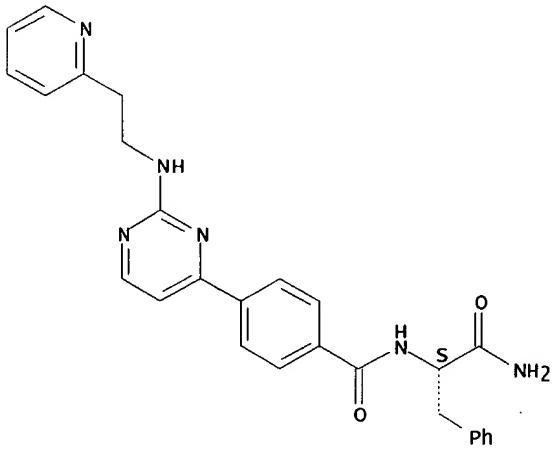
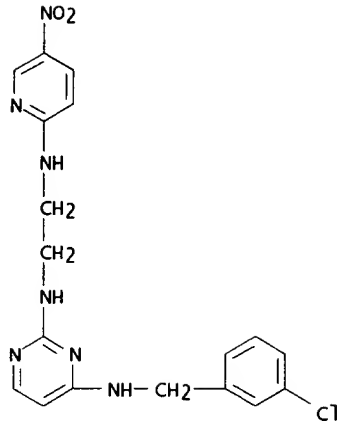


RN 252904-36-2 HCAPLUS
CN Benzenepropanamide, .alpha.-[[4-[2-[[2-(2-pyridinyl)ethyl]amino]-4-pyrimidinyl]benzoyl]amino]-, (.alpha.S)- (9CI) (CA INDEX NAME)

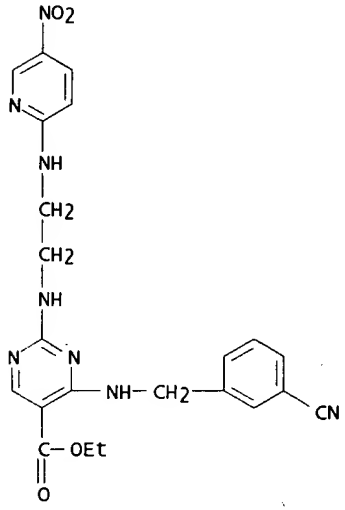
Absolute stereochemistry.



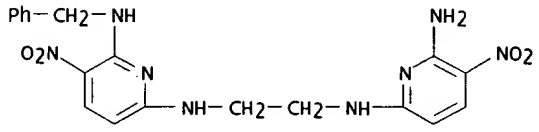
RN 252904-37-3 HCAPLUS
CN 2,4-Pyrimidinediamine, N4-[(3-chlorophenyl)methyl]-N2-[2-[(5-nitro-2-pyridinyl)amino]ethyl]- (9CI) (CA INDEX NAME)



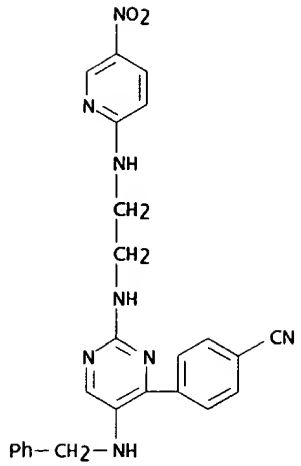
RN 252904-38-4 HCAPLUS
CN 5-Pyrimidinecarboxylic acid, 4-[[(3-cyanophenyl)methyl]amino]-2-[[2-[(5-nitro-2-pyridinyl)amino]ethyl]amino]-, ethyl ester (9CI) (CA INDEX NAME)



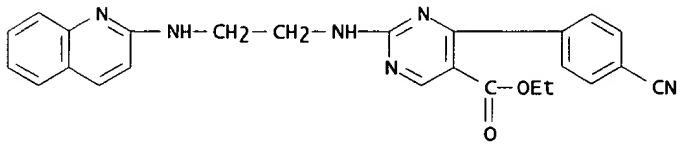
RN 252904-39-5 HCAPLUS
CN 2,6-Pyridinediamine, N6-[2-[(6-amino-5-nitro-2-pyridinyl)amino]ethyl]-3-nitro-N2-(phenylmethyl)- (9CI) (CA INDEX NAME)



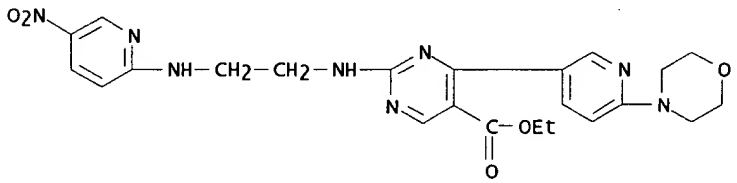
RN 252904-40-8 HCAPLUS
CN Benzonitrile, 4-[2-[[2-[(5-nitro-2-pyridinyl)amino]ethyl]amino]-5-[(phenylmethyl)amino]-4-pyrimidinyl]- (9CI) (CA INDEX NAME)



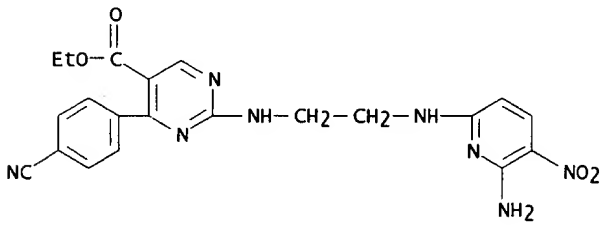
RN 252904-41-9 HCAPLUS
CN 5-Pyrimidinecarboxylic acid, 4-(4-cyanophenyl)-2-[[2-(2-quinolinylamino)ethyl]amino]-, ethyl ester (9CI) (CA INDEX NAME)



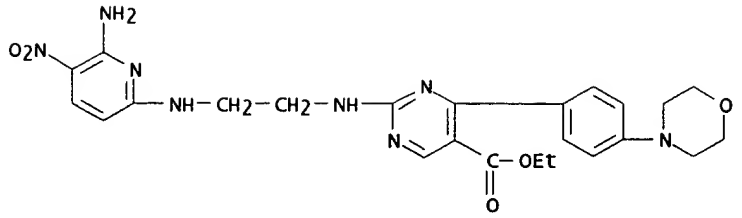
RN 252904-42-0 HCAPLUS
CN 5-Pyrimidinecarboxylic acid, 4-[6-(4-morpholinyl)-3-pyridinyl]-2-[[2-[(5-nitro-2-pyridinyl)amino]ethyl]amino]-, ethyl ester (9CI) (CA INDEX NAME)



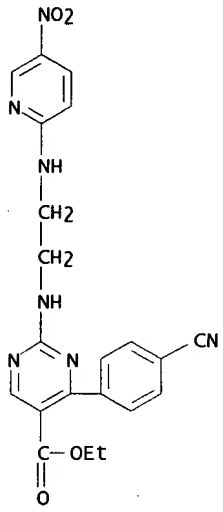
RN 252904-43-1 HCAPLUS
CN 5-Pyrimidinecarboxylic acid, 2-[[2-[(6-amino-5-nitro-2-pyridinyl)amino]ethyl]amino]-4-(4-cyanophenyl)-, ethyl ester (9CI) (CA INDEX NAME)



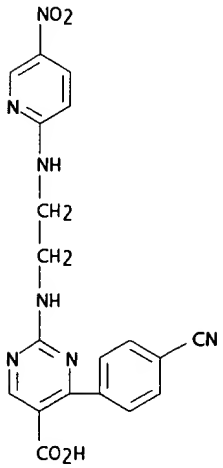
RN 252904-44-2 HCAPLUS
CN 5-Pyrimidinecarboxylic acid, 2-[[2-[(6-amino-5-nitro-2-pyridinyl)amino]ethyl]amino]-4-[4-(4-morpholinyl)phenyl]-, ethyl ester (9CI) (CA INDEX NAME)



RN 252904-45-3 HCAPLUS
CN 5-Pyrimidinecarboxylic acid, 4-(4-cyanophenyl)-2-[[2-[(5-nitro-2-pyridinyl)amino]ethyl]amino]-, ethyl ester (9CI) (CA INDEX NAME)

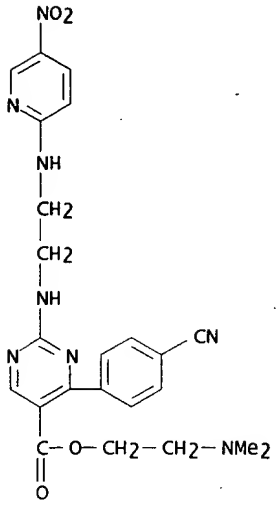


RN 252904-48-6 HCAPLUS
CN 5-Pyrimidinecarboxylic acid, 4-(4-cyanophenyl)-2-[[2-[(5-nitro-2-pyridinyl)amino]ethyl]amino]- (9CI) (CA INDEX NAME)

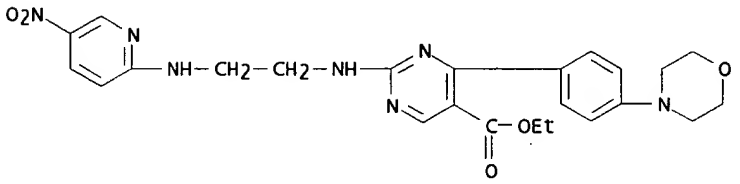


RN 252904-58-8 HCAPLUS
CN 5-Pyrimidinecarboxylic acid, 4-(4-cyanophenyl)-2-[[2-[(5-nitro-2-

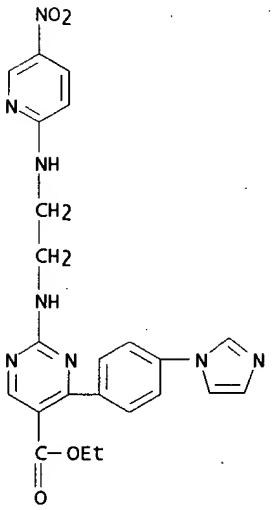
pyridinyl)amino]ethyl]amino]-, 2-(dimethylamino)ethyl ester (9CI) (CA INDEX NAME)



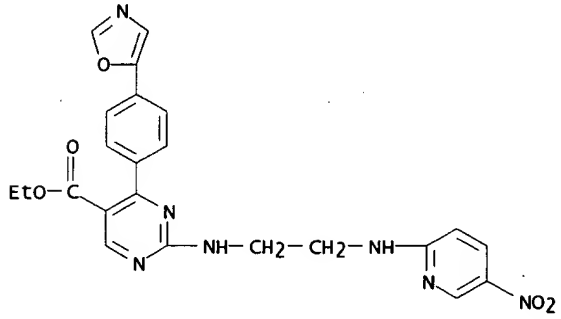
RN 252904-64-6 HCAPLUS
CN 5-Pyrimidinecarboxylic acid, 4-[4-(4-morpholinyl)phenyl]-2-[[2-[(5-nitro-2-pyridinyl)amino]ethyl]amino]-, ethyl ester (9CI) (CA INDEX NAME)



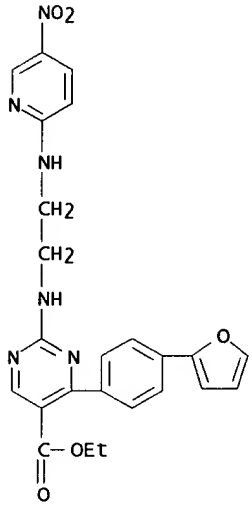
RN 252904-67-9 HCAPLUS
CN 5-Pyrimidinecarboxylic acid, 4-[4-(1H-imidazol-1-yl)phenyl]-2-[[2-[(5-nitro-2-pyridinyl)amino]ethyl]amino]-, ethyl ester (9CI) (CA INDEX NAME)



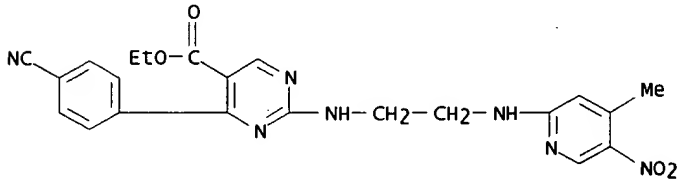
RN 252904-68-0 HCAPLUS
CN 5-Pyrimidinecarboxylic acid, 2-[[2-[(5-nitro-2-pyridinyl)amino]ethyl]amino]-4-[4-(5-oxazolyl)phenyl]-, ethyl ester (9CI) (CA INDEX NAME)



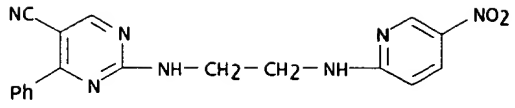
RN 252904-69-1 HCAPLUS
CN 5-Pyrimidinecarboxylic acid, 4-[4-(2-furanyl)phenyl]-2-[[2-[(5-nitro-2-pyridinyl)amino]ethyl]amino]-, ethyl ester (9CI) (CA INDEX NAME)



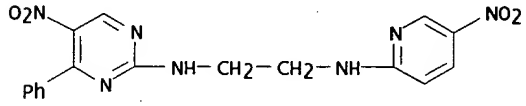
RN 252904-70-4 HCAPLUS
CN 5-Pyrimidinecarboxylic acid, 4-(4-cyanophenyl)-2-[[2-[(4-methyl-5-nitro-2-pyridinyl)amino]ethyl]amino]-, ethyl ester (9CI) (CA INDEX NAME)



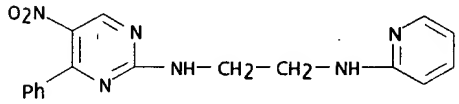
RN 252904-71-5 HCAPLUS
CN 5-Pyrimidinecarbonitrile, 2-[[2-[(5-nitro-2-pyridinyl)amino]ethyl]amino]-4-phenyl- (9CI) (CA INDEX NAME)



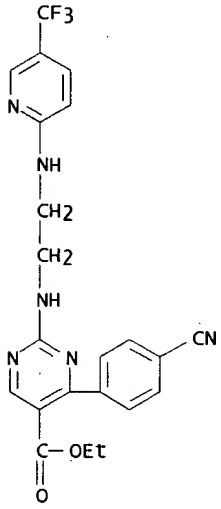
RN 252904-73-7 HCAPLUS
CN 1,2-Ethanediamine, N-(5-nitro-4-phenyl-2-pyrimidinyl)-N'-(5-nitro-2-pyridinyl)- (9CI) (CA INDEX NAME)



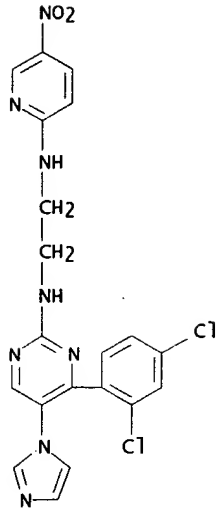
RN 252904-74-8 HCAPLUS
CN 1,2-Ethanediamine, N-(5-nitro-4-phenyl-2-pyrimidinyl)-N'-2-pyridinyl- (9CI) (CA INDEX NAME)



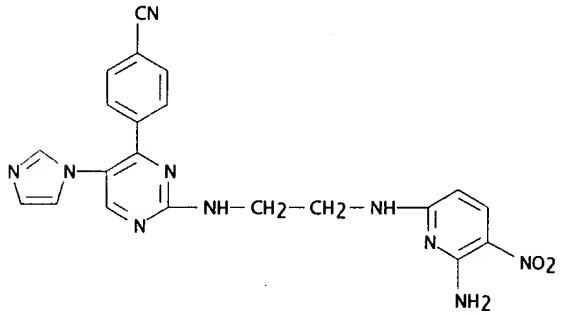
RN 252904-75-9 HCAPLUS
CN 5-Pyrimidinecarboxylic acid, 4-(4-cyanophenyl)-2-[[2-[[5-(trifluoromethyl)-2-pyridinyl]amino]ethyl]amino]-, ethyl ester (9CI) (CA INDEX NAME)



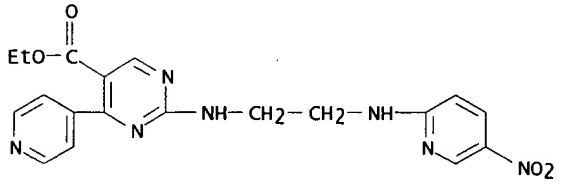
RN 252904-84-0 HCAPLUS
CN 1,2-Ethanediamine, N-[4-(2,4-dichlorophenyl)-5-(1H-imidazol-1-yl)-2-pyrimidinyl]-N'-(5-nitro-2-pyridinyl)- (9CI) (CA INDEX NAME)



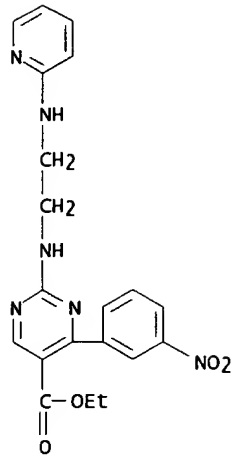
RN 252904-93-1 HCAPLUS
CN Benzonitrile, 4-[2-[[2-[(6-amino-5-nitro-2-pyridinyl)amino]ethyl]amino]-5-(1H-imidazol-1-yl)-4-pyrimidinyl]- (9CI) (CA INDEX NAME)



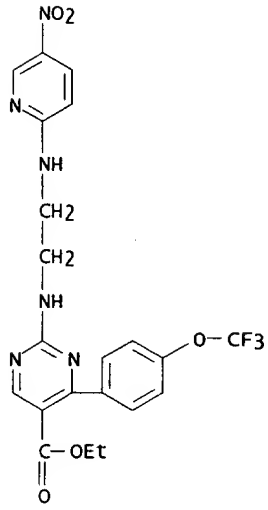
RN 252905-03-6 HCAPLUS
CN 5-Pyrimidinecarboxylic acid, 2-[[2-[(5-nitro-2-pyridinyl)amino]ethyl]amino]-4-(4-pyridinyl)-, ethyl ester (9CI) (CA INDEX NAME)



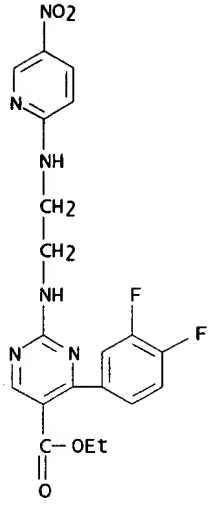
RN 252905-12-7 HCAPLUS
CN 5-Pyrimidinecarboxylic acid, 4-(3-nitrophenyl)-2-[[2-(2-pyridinylamino)ethyl]amino]-, ethyl ester (9CI) (CA INDEX NAME)



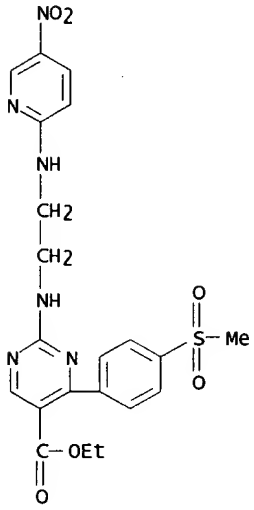
RN 252905-23-0 HCAPLUS
CN 5-Pyrimidinecarboxylic acid, 2-[[2-[(5-nitro-2-pyridinyl)amino]ethyl]amino]-4-[4-(trifluoromethoxy)phenyl]-, ethyl ester (9CI) (CA INDEX NAME)



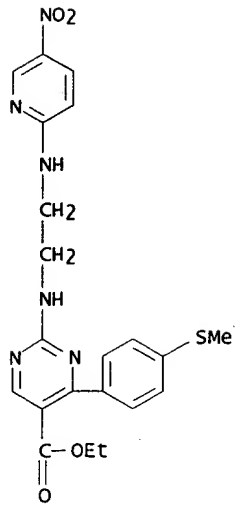
RN 252905-28-5 HCAPLUS
CN 5-Pyrimidinecarboxylic acid, 4-(3,4-difluorophenyl)-2-[[2-[(5-nitro-2-pyridinyl)amino]ethyl]amino]-, ethyl ester (9CI) (CA INDEX NAME)



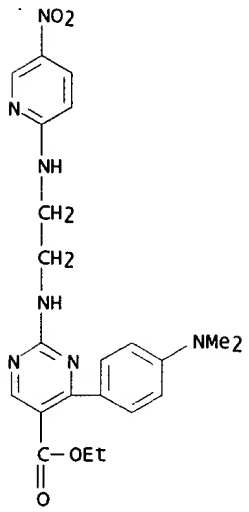
RN 252905-36-5 HCAPLUS
CN 5-Pyrimidinecarboxylic acid, 4-[4-(methylsulfonyl)phenyl]-2-[[2-[(5-nitro-2-pyridinyl)amino]ethyl]amino]-, ethyl ester (9CI) (CA INDEX NAME)



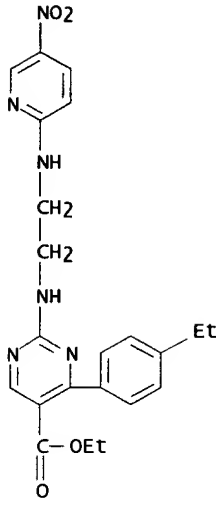
RN 252905-42-3 HCAPLUS
CN 5-Pyrimidinecarboxylic acid, 4-[4-(methylthio)phenyl]-2-[[2-[(5-nitro-2-pyridinyl)amino]ethyl]amino]-, ethyl ester (9CI) (CA INDEX NAME)



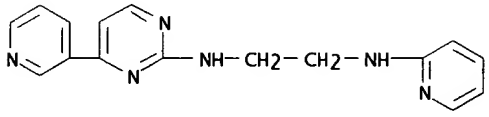
RN 252905-47-8 HCAPLUS
CN 5-Pyrimidinecarboxylic acid, 4-[4-(dimethylamino)phenyl]-2-[[2-[(5-nitro-2-pyridinyl)amino]ethyl]amino]-, ethyl ester (9CI) (CA INDEX NAME)



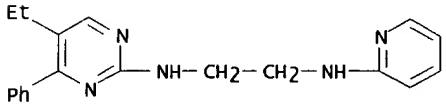
RN 252906-12-0 HCAPLUS
CN 5-Pyrimidinecarboxylic acid, 4-(4-ethylphenyl)-2-[[2-[(5-nitro-2-pyridinyl)amino]ethyl]amino]-, ethyl ester (9CI) (CA INDEX NAME)



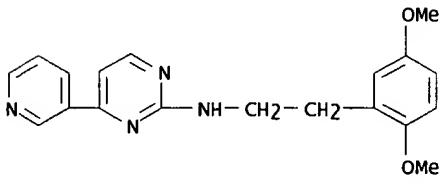
RN 252906-13-1 HCAPLUS
CN 1,2-Ethanediamine, N-2-pyridinyl-N'-[4-(3-pyridinyl)-2-pyrimidinyl]- (9CI) (CA INDEX NAME)



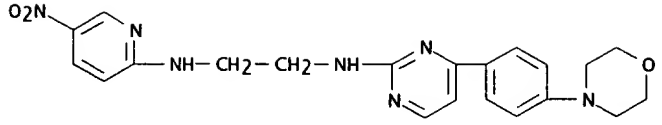
RN 252906-16-4 HCAPLUS
CN 1,2-Ethanediamine, N-(5-ethyl-4-phenyl-2-pyrimidinyl)-N'-2-pyridinyl- (9CI) (CA INDEX NAME)



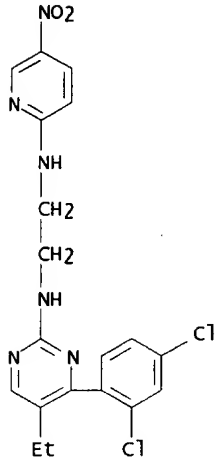
RN 252906-17-5 HCAPLUS
CN 2-Pyrimidinamine, N-[2-(2,5-dimethoxyphenyl)ethyl]-4-(3-pyridinyl)- (9CI) (CA INDEX NAME)



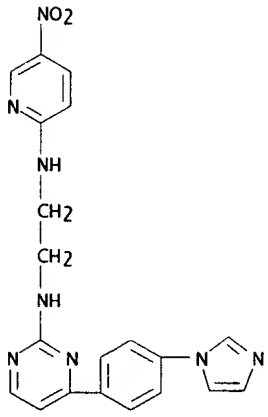
RN 252906-18-6 HCAPLUS
CN 1,2-Ethanediamine, N-[4-[4-(4-morpholinyl)phenyl]-2-pyrimidinyl]-N'-(5-nitro-2-pyridinyl)- (9CI) (CA INDEX NAME)



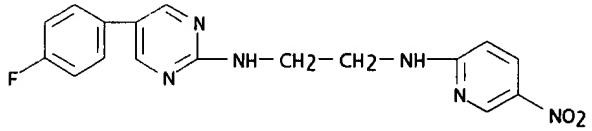
RN 252906-20-0 HCAPLUS
CN 1,2-Ethanediamine, N-[4-(2,4-dichlorophenyl)-5-ethyl-2-pyrimidinyl]-N'-(5-nitro-2-pyridinyl)- (9CI) (CA INDEX NAME)



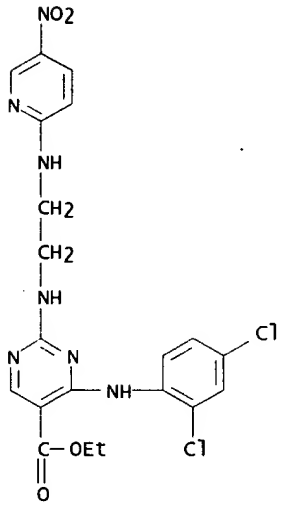
RN 252906-21-1 HCAPLUS
CN 1,2-Ethanediamine, N-[4-[4-(1H-imidazol-1-yl)phenyl]-2-pyrimidinyl]-N'-(5-nitro-2-pyridinyl)- (9CI) (CA INDEX NAME)



RN 252916-60-2 HCAPLUS
CN 1,2-Ethanediamine, N-[5-(4-fluorophenyl)-2-pyrimidinyl]-N'-(5-nitro-2-pyridinyl)- (9CI) (CA INDEX NAME)



RN 252916-61-3 HCAPLUS
CN 5-Pyrimidinecarboxylic acid, 4-[(2,4-dichlorophenyl)amino]-2-[[2-[(5-nitro-2-pyridinyl)amino]ethyl]amino]-, ethyl ester (9CI) (CA INDEX NAME)



RN 252916-62-4 HCAPLUS
CN 5-Pyrimidinecarboxylic acid, 4-(4-cyanophenyl)-2-[[2-[[5-[(1,1-dimethylethoxy)carbonyl]-2-pyridinyl]amino]ethyl]amino]-, ethyl ester (9CI) (CA INDEX NAME)

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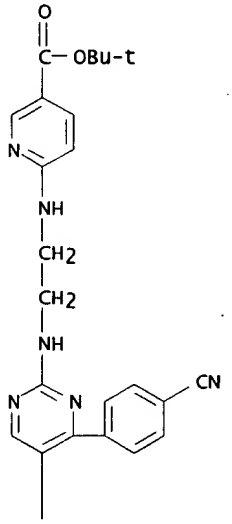

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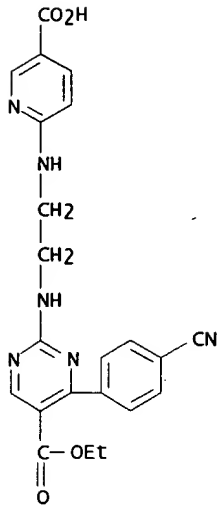
RN 252916-63-5 HCAPLUS
CN 5-Pyrimidinecarboxylic acid, 2-[[2-[(5-carboxy-2-pyridinyl)amino]ethyl]amino]-4-(4-cyanophenyl)-, 5-ethyl ester (9CI) (CA INDEX NAME)



RN 252916-72-6 HCAPLUS
CN 5-Pyrimidinecarboxylic acid, 4-(4-cyanophenyl)-2-[[2-[[5-(methoxycarbonyl)-2-pyridinyl]amino]ethyl]amino]-, ethyl ester (9CI) (CA INDEX NAME)

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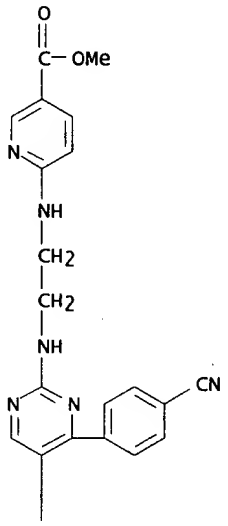

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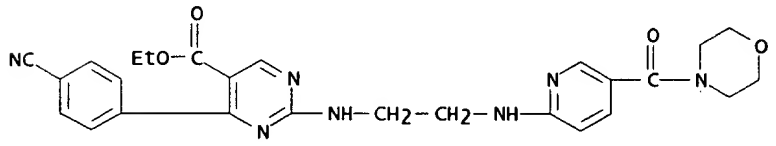
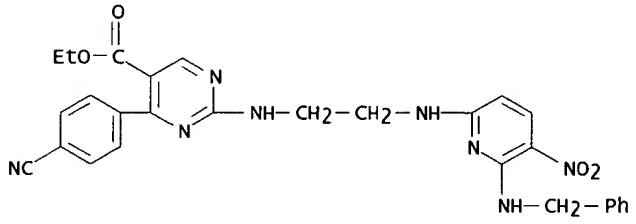
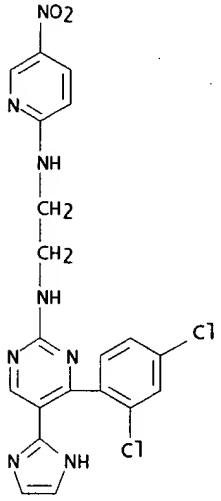
RN 252916-74-8 HCAPLUS
CN 5-Pyrimidinecarboxylic acid, 4-(4-cyanophenyl)-2-[[2-[[5-(4-morpholinylcarbonyl)-2-pyridinyl]amino]ethyl]amino]-, ethyl ester (9CI) (CA INDEX NAME)



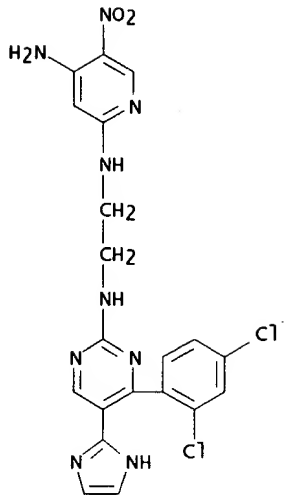
RN 252916-75-9 HCAPLUS
CN 5-Pyrimidinecarboxylic acid, 4-(4-cyanophenyl)-2-[[2-[[5-nitro-6-[(phenylmethyl)amino]-2-pyridinyl]amino]ethyl]amino]-, ethyl ester (9CI) (CA INDEX NAME)



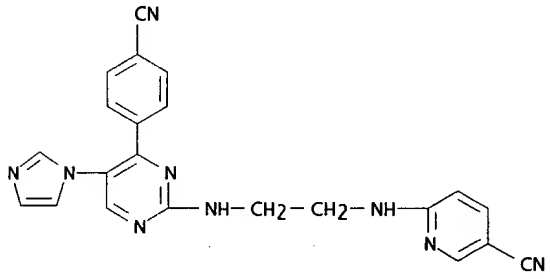
RN 252916-76-0 HCAPLUS
CN 1,2-Ethanediamine, N-[4-(2,4-dichlorophenyl)-5-(1H-imidazol-2-yl)-2-pyrimidinyl]-N'-(5-nitro-2-pyridinyl)- (9CI) (CA INDEX NAME)



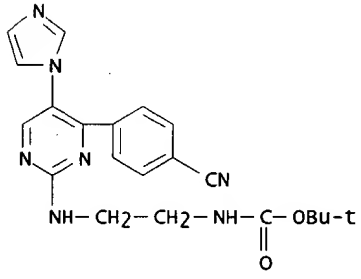
RN 252916-77-1 HCAPLUS
CN 2,4-Pyridinediamine, N2-[2-[[4-(2,4-dichlorophenyl)-5-(1H-imidazol-2-yl)-2-pyrimidinyl]amino]ethyl]-5-nitro- (9CI) (CA INDEX NAME)



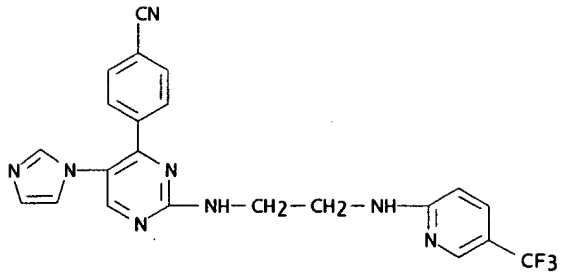
RN 252916-78-2 HCAPLUS
CN 3-Pyridinecarbonitrile, 6-[[2-[[4-(4-cyanophenyl)-5-(1H-imidazol-1-yl)-2-pyrimidinyl]amino]ethyl]amino]- (9CI) (CA INDEX NAME)



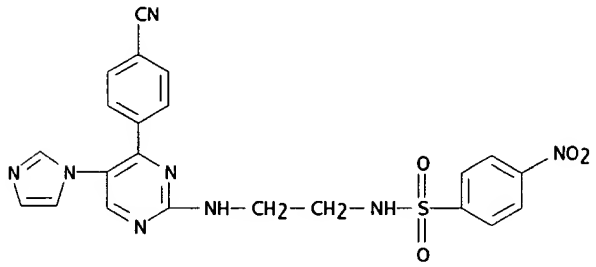
RN 252916-79-3 HCAPLUS
CN Carbamic acid, [2-[[4-(4-cyanophenyl)-5-(1H-imidazol-1-yl)-2-pyrimidinyl]amino]ethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



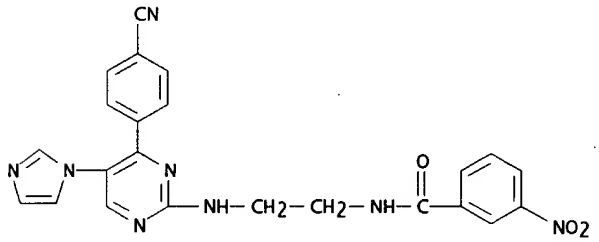
RN 252916-80-6 HCAPLUS
CN Benzonitrile, 4-[5-(1H-imidazol-1-yl)-2-[[2-[[5-(trifluoromethyl)-2-pyridinyl]amino]ethyl]amino]-4-pyrimidinyl]- (9CI) (CA INDEX NAME)



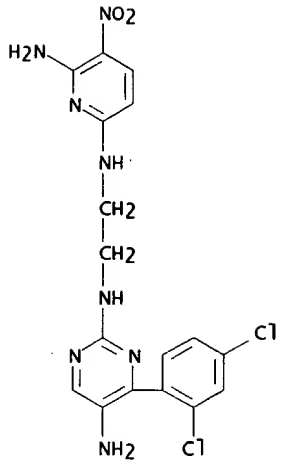
RN 252916-81-7 HCAPLUS
CN Benzenesulfonamide, N-[2-[[4-(4-cyanophenyl)-5-(1H-imidazol-1-yl)-2-pyrimidinyl]amino]ethyl]-4-nitro- (9CI) (CA INDEX NAME)



RN 252916-82-8 HCAPLUS
CN Benzamide, N-[2-[[4-(4-cyanophenyl)-5-(1H-imidazol-1-yl)-2-pyrimidinyl]amino]ethyl]-3-nitro- (9CI) (CA INDEX NAME)



RN 252916-83-9 HCAPLUS
CN 2,5-Pyrimidinediamine, N2-[2-[(6-amino-5-nitro-2-pyridinyl)amino]ethyl]-4-(2,4-dichlorophenyl)- (9CI) (CA INDEX NAME)



RN 252916-89-5 HCAPLUS
CN 2,6-Pyridinediamine, N6-[2-[[4-(2,4-dichlorophenyl)-5-(4-morpholinyl)-2-pyrimidinyl]amino]ethyl]-3-nitro- (9CI) (CA INDEX NAME)

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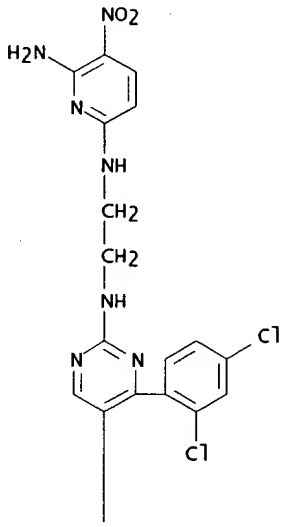

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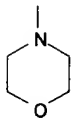

RN 252916-91-9 HCAPLUS
CN 2,6-Pyridinediamine, N6-[2-[[4-(2,4-dichlorophenyl)-5-(1-piperazinyl)-2-pyrimidinyl]amino]ethyl]-3-nitro- (9CI) (CA INDEX NAME)

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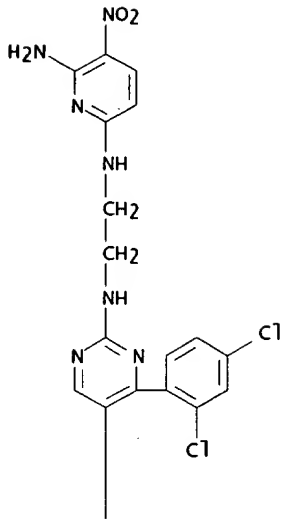

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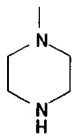
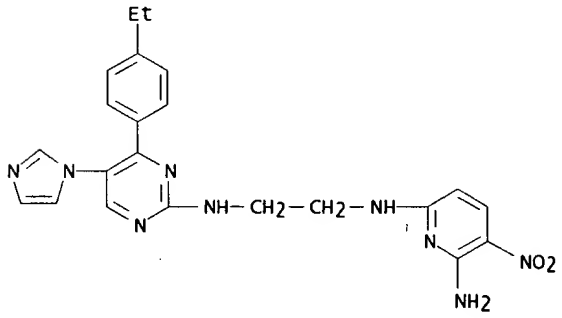


RN 252916-92-0 HCAPLUS
CN 2,6-Pyridinediamine, N6-[2-[[4-(4-ethylphenyl)-5-(1H-imidazol-1-yl)-2-pyrimidinyl]amino]ethyl]-3-nitro- (9CI) (CA INDEX NAME)



RN 252916-93-1 HCAPLUS
CN 2,6-Pyridinediamine, N6-[2-[[4-(2,4-dichlorophenyl)-5-(4-pyridinyl)-2-pyrimidinyl]amino]ethyl]-3-nitro- (9CI) (CA INDEX NAME)

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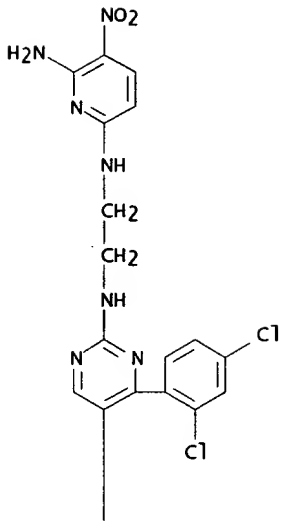

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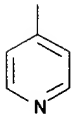
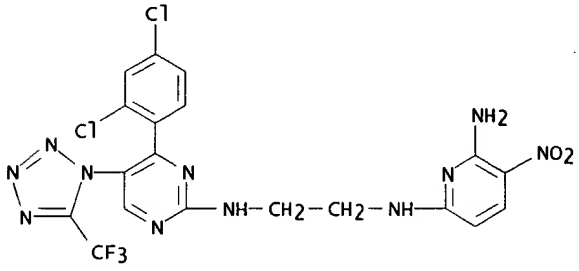


RN 252916-94-2 HCAPLUS
CN 2,6-Pyridinediamine, N6-[2-[[4-(2,4-dichlorophenyl)-5-[5-(trifluoromethyl)-1H-tetrazol-1-yl]-2-pyrimidinyl]amino]ethyl]-3-nitro- (9CI) (CA INDEX NAME)



RN 252916-95-3 HCAPLUS
CN 2,6-Pyridinediamine, N6-[2-[[4-(2,4-dichlorophenyl)-5-(4-methyl-1-piperazinyl)-2-pyrimidinyl]amino]ethyl]-3-nitro- (9CI) (CA INDEX NAME)

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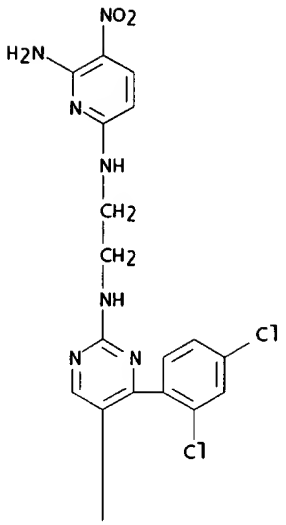

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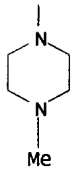

RN 252916-96-4 HCAPLUS
CN 1,2-Ethanediamine, N-[4-(2,4-dichlorophenyl)-5-(4-methyl-1-piperazinyl)-2-pyrimidinyl]-N'-(5-nitro-2-pyridinyl)- (9CI) (CA INDEX NAME)

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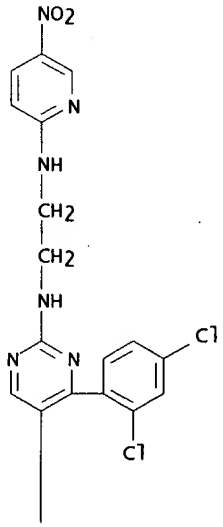
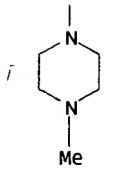
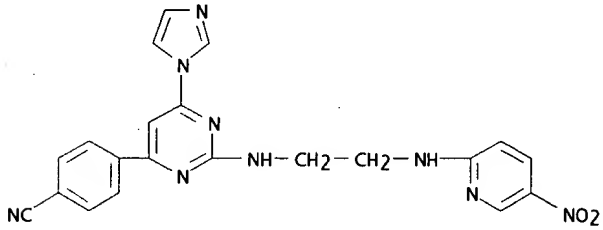
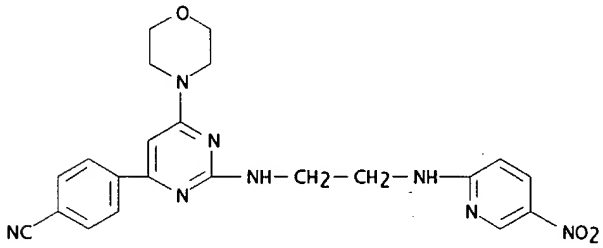




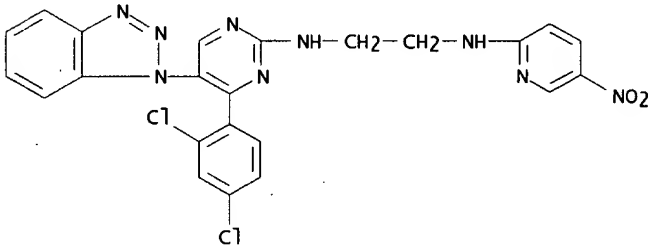
RN 252916-97-5 HCAPLUS
CN Benzonitrile, 4-[6-(1H-imidazol-1-yl)-2-[[2-[(5-nitro-2-pyridinyl)amino]ethyl]amino]-4-pyrimidinyl]- (9CI) (CA INDEX NAME)



RN 252916-98-6 HCAPLUS
CN Benzonitrile, 4-[6-(4-morpholinyl)-2-[[2-[(5-nitro-2-pyridinyl)amino]ethyl]amino]-4-pyrimidinyl]- (9CI) (CA INDEX NAME)



RN 252916-99-7 HCAPLUS
CN 1,2-Ethanediamine, N-[5-(1H-benzotriazol-1-yl)-4-(2,4-dichlorophenyl)-2-pyrimidinyl]-N'-(5-nitro-2-pyridinyl)- (9CI) (CA INDEX NAME)



RN 252917-00-3 HCAPLUS
CN 1,2-Ethanediamine, N-[4-(2,4-dichlorophenyl)-5-(1-piperazinyl)-2-pyrimidinyl]-N'-(5-nitro-2-pyridinyl)- (9CI) (CA INDEX NAME)

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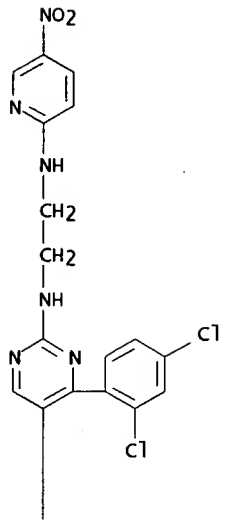

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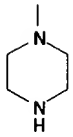
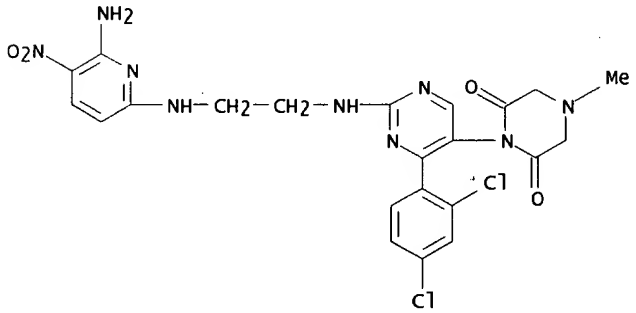
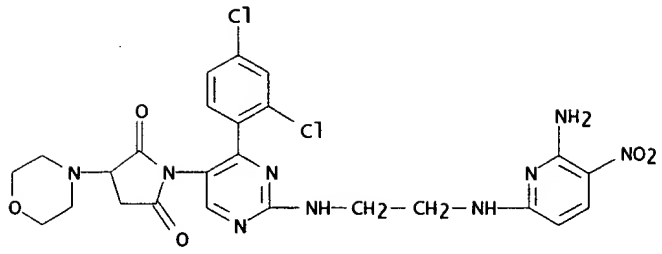


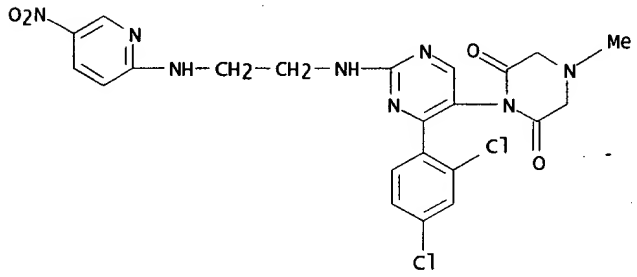
RN 252917-01-4 HCAPLUS
CN 2,6-Piperazinedione, 1-[2-[[2-[(6-amino-5-nitro-2-pyridinyl)amino]ethyl]amino]-4-(2,4-dichlorophenyl)-5-pyrimidinyl]-4-methyl- (9CI) (CA INDEX NAME)



RN 252917-02-5 HCAPLUS
CN 2,5-Pyrrolidinedione, 1-[2-[[2-[(6-amino-5-nitro-2-pyridinyl)amino]ethyl]amino]-4-(2,4-dichlorophenyl)-5-pyrimidinyl]-3-(4-morpholinyl)- (9CI) (CA INDEX NAME)



RN 252917-03-6 HCAPLUS
CN 2,6-Piperazinedione, 1-[4-(2,4-dichlorophenyl)-2-[[2-[(5-nitro-2-pyridinyl)amino]ethyl]amino]-5-pyrimidinyl]-4-methyl- (9CI) (CA INDEX NAME)



RN 252917-04-7 HCAPLUS
CN 2,5-Pyrrolidinedione, 1-[2-[[2-[(6-amino-5-nitro-2-pyridinyl)amino]ethyl]amino]-4-(2,4-dichlorophenyl)-5-pyrimidinyl]-3-(dimethylamino)- (9CI) (CA INDEX NAME)

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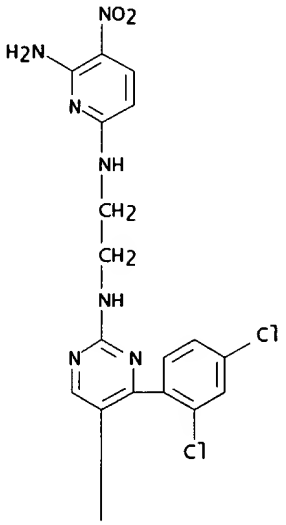

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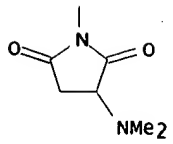
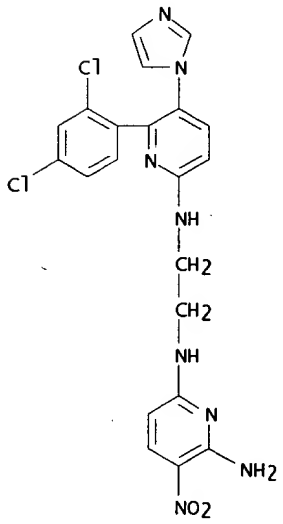


RN 252917-05-8 HCAPLUS
CN 2,6-Pyridinediamine, N6-[2-[[6-(2,4-dichlorophenyl)-5-(1H-imidazol-1-yl)-2-pyridinyl]amino]ethyl]-3-nitro- (9CI) (CA INDEX NAME)



RN 252917-06-9 HCAPLUS
CN 3-Pyridinecarbonitrile, 6-[[2-[[4-(2,4-dichlorophenyl)-5-(4-methyl-1H-imidazol-2-yl)-2-pyrimidinyl]amino]ethyl]amino]- (9CI) (CA INDEX NAME)

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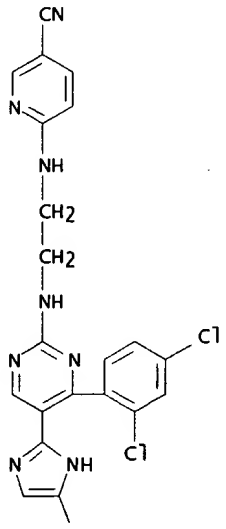
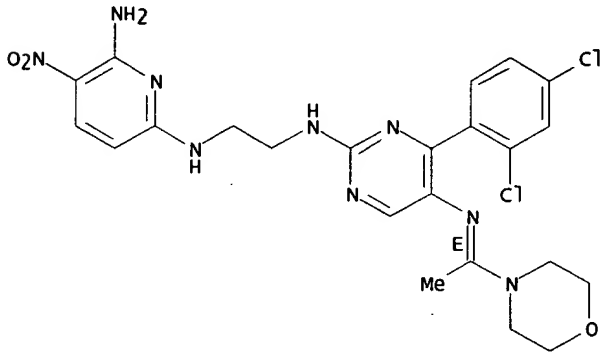


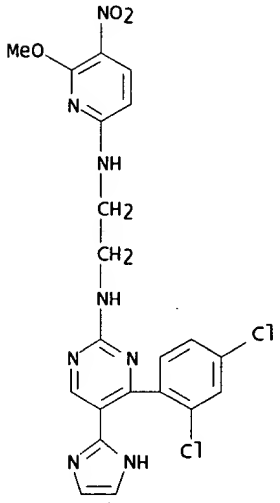
Me

RN 252917-07-0 HCAPLUS
CN Morpholine, 4-[(1E)-1-[[2-[[2-[(6-amino-5-nitro-2-pyridinyl)amino]ethyl]amino]-4-(2,4-dichlorophenyl)-5-pyrimidinyl]imino]ethyl]- (9CI) (CA INDEX NAME)

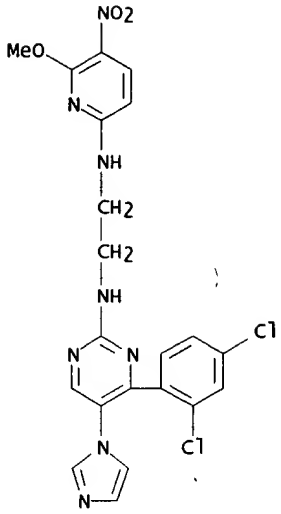
Double bond geometry as shown.



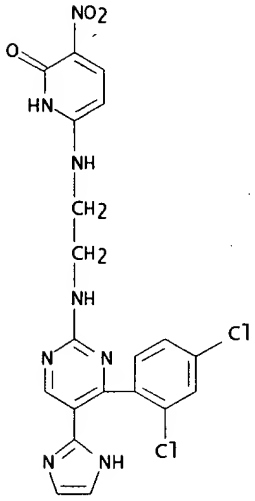
RN 252917-08-1 HCAPLUS
CN 1,2-Ethanediamine, N-[4-(2,4-dichlorophenyl)-5-(1H-imidazol-2-yl)-2-pyrimidinyl]-N'-(6-methoxy-5-nitro-2-pyridinyl)- (9CI) (CA INDEX NAME)



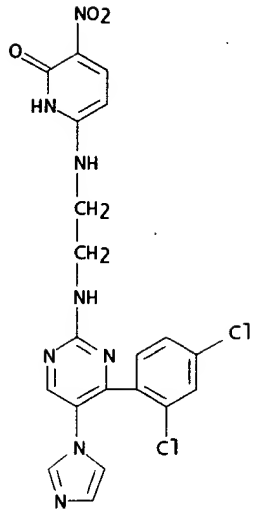
RN 252917-09-2 HCAPLUS
CN 1,2-Ethanediamine, N-[4-(2,4-dichlorophenyl)-5-(1H-imidazol-1-yl)-2-pyrimidinyl]-N'-(6-methoxy-5-nitro-2-pyridinyl)- (9CI) (CA INDEX NAME)



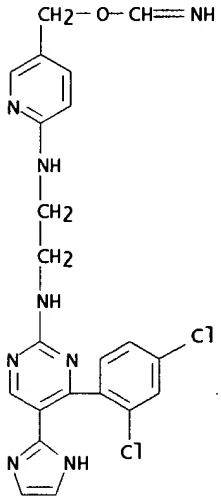
RN 252917-10-5 HCAPLUS
CN 2(1H)-Pyridinone, 6-[[2-[[4-(2,4-dichlorophenyl)-5-(1H-imidazol-2-yl)-2-pyrimidinyl]amino]ethyl]amino]-3-nitro- (9CI) (CA INDEX NAME)



RN 252917-16-1 HCAPLUS
CN 2(1H)-Pyridinone, 6-[[2-[[4-(2,4-dichlorophenyl)-5-(1H-imidazol-1-yl)-2-pyrimidinyl]amino]ethyl]amino]-3-nitro- (9CI) (CA INDEX NAME)



RN 252917-17-2 HCAPLUS
CN Methanimidic acid, [6-[[2-[[4-(2,4-dichlorophenyl)-5-(1H-imidazol-2-yl)-2-pyrimidinyl]amino]ethyl]amino]-3-pyridinyl]methyl ester (9CI) (CA INDEX NAME)



RN 252917-18-3 HCAPLUS
CN 3-Pyridinecarboxamide, 6-[[2-[[4-(2,4-dichlorophenyl)-5-(1H-imidazol-2-yl)-2-pyrimidinyl]amino]ethyl]amino]- (9CI) (CA INDEX NAME)

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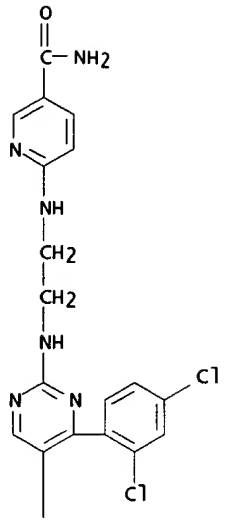

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RN 252917-19-4 HCAPLUS
CN 3-Pyridinecarboximidamide, 6-[[2-[[4-(2,4-dichlorophenyl)-5-(1H-imidazol-2-yl)-2-pyrimidinyl]amino]ethyl]amino]-N-hydroxy- (9CI) (CA INDEX NAME)

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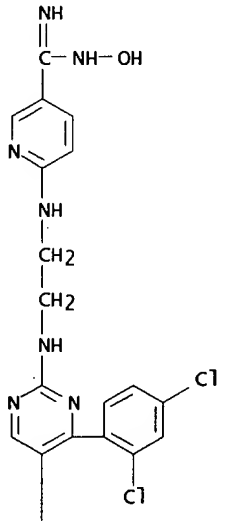

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RN 252917-20-7 HCAPLUS
CN 3-Pyridinecarboximidamide, 6-[[2-[[4-(2,4-dichlorophenyl)-5-(1H-imidazol-1-yl)-2-pyrimidinyl]amino]ethyl]amino]-N-hydroxy- (9CI) (CA INDEX NAME)

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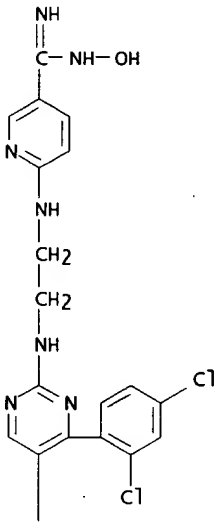

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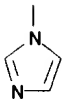

RN 252917-21-8 HCAPLUS
CN 3-Pyridinecarboximidamide, 6-[[2-[[4-(2,4-dichlorophenyl)-5-(1H-imidazol-2-yl)-2-pyrimidinyl]amino]ethyl]amino]- (9CI) (CA INDEX NAME)

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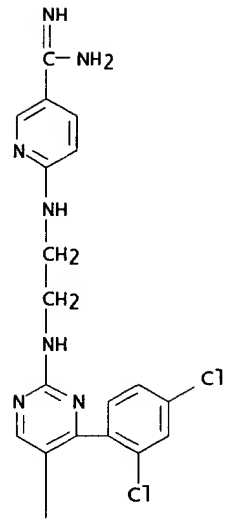

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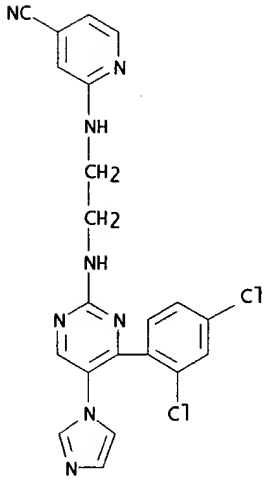
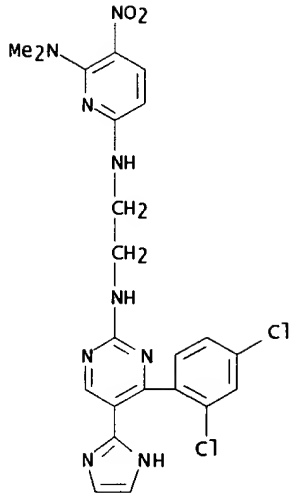
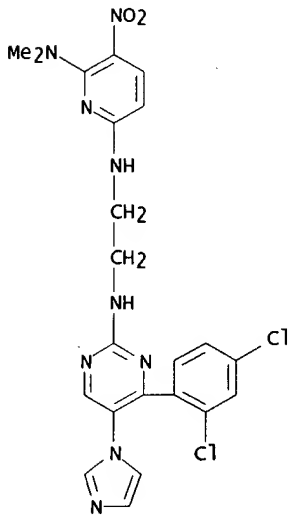
RN 252917-22-9 HCAPLUS
CN 4-Pyridinecarbonitrile, 2-[[2-[[4-(2,4-dichlorophenyl)-5-(1H-imidazol-1-yl)-2-pyrimidinyl]amino]ethyl]amino]- (9CI) (CA INDEX NAME)



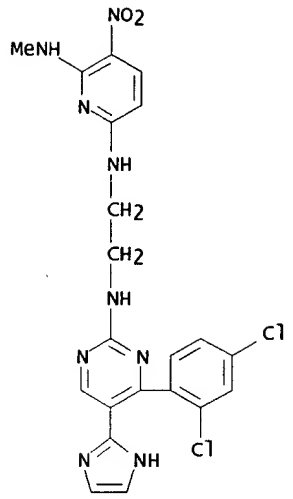
RN 252917-23-0 HCAPLUS
CN 2,6-Pyridinediamine, N6-[2-[[4-(2,4-dichlorophenyl)-5-(1H-imidazol-2-yl)-2-pyrimidinyl]amino]ethyl]-N2,N2-dimethyl-3-nitro- (9CI) (CA INDEX NAME)



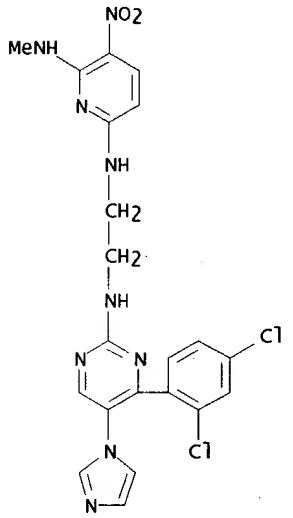
RN 252917-24-1 HCAPLUS
CN 2,6-Pyridinediamine, N6-[2-[[4-(2,4-dichlorophenyl)-5-(1H-imidazol-1-yl)-2-pyrimidinyl]amino]ethyl]-N2,N2-dimethyl-3-nitro- (9CI) (CA INDEX NAME)



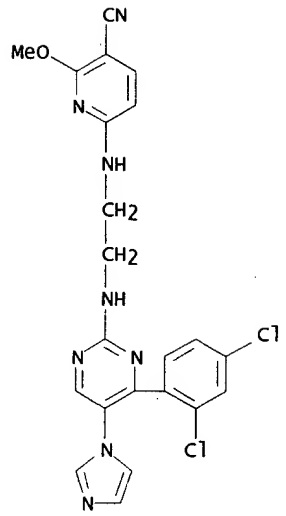
RN 252917-25-2 HCAPLUS
CN 2,6-Pyridinediamine, N6-[2-[[4-(2,4-dichlorophenyl)-5-(1H-imidazol-2-yl)-2-pyrimidinyl]amino]ethyl]-N2-methyl-3-nitro- (9CI) (CA INDEX NAME)



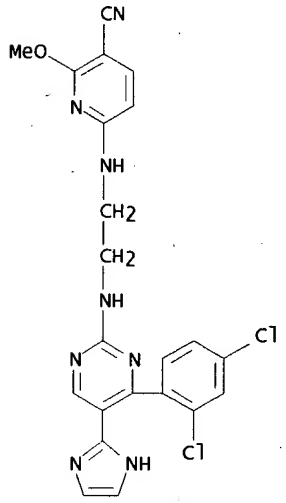
RN 252917-26-3 HCAPLUS
CN 2,6-Pyridinediamine, N6-[2-[[4-(2,4-dichlorophenyl)-5-(1H-imidazol-1-yl)-2-pyrimidinyl]amino]ethyl]-N2-methyl-3-nitro- (9CI) (CA INDEX NAME)



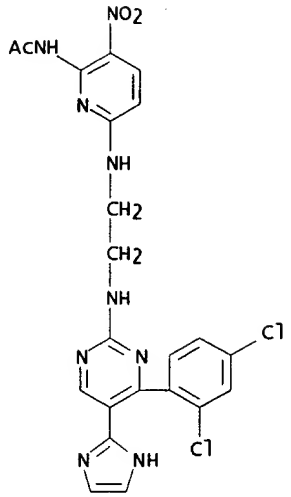
RN 252917-27-4 HCAPLUS
CN 3-Pyridinecarbonitrile, 6-[[2-[[4-(2,4-dichlorophenyl)-5-(1H-imidazol-1-yl)-2-pyrimidinyl]amino]ethyl]amino]-2-methoxy- (9CI) (CA INDEX NAME)



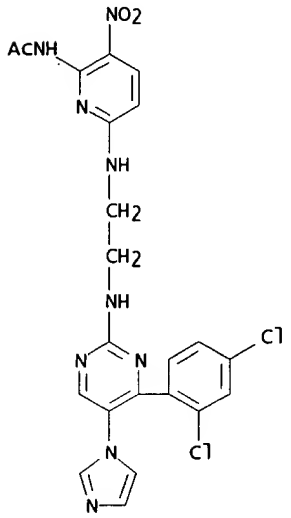
RN 252917-28-5 HCAPLUS
CN 3-Pyridinecarbonitrile, 6-[[2-[[4-(2,4-dichlorophenyl)-5-(1H-imidazol-2-yl)-2-pyrimidinyl]amino]ethyl]amino]-2-methoxy- (9CI) (CA INDEX NAME)



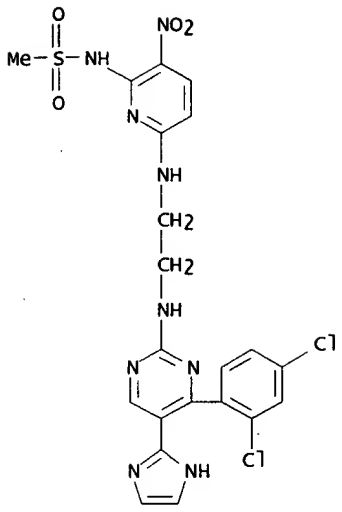
RN 252935-86-7 HCAPLUS
CN Acetamide, N-[6-[[2-[[4-(2,4-dichlorophenyl)-5-(1H-imidazol-2-yl)-2-pyrimidinyl]amino]ethyl]amino]-3-nitro-2-pyridinyl]- (9CI) (CA INDEX NAME)



RN 252935-87-8 HCAPLUS
CN Acetamide, N-[6-[[2-[[4-(2,4-dichlorophenyl)-5-(1H-imidazol-1-yl)-2-pyrimidinyl]amino]ethyl]amino]-3-nitro-2-pyridinyl]- (9CI) (CA INDEX NAME)



RN 252935-88-9 HCAPLUS
CN Methanesulfonamide, N-[6-[[2-[[4-(2,4-dichlorophenyl)-5-(1H-imidazol-2-yl)-2-pyrimidinyl]amino]ethyl]amino]-3-nitro-2-pyridinyl]- (9CI) (CA INDEX NAME)



RN 252935-89-0 HCAPLUS
CN Methanesulfonamide, N-[6-[[2-[[4-(2,4-dichlorophenyl)-5-(1H-imidazol-1-yl)-2-pyrimidinyl]amino]ethyl]amino]-3-nitro-2-pyridinyl]- (9CI) (CA INDEX NAME)

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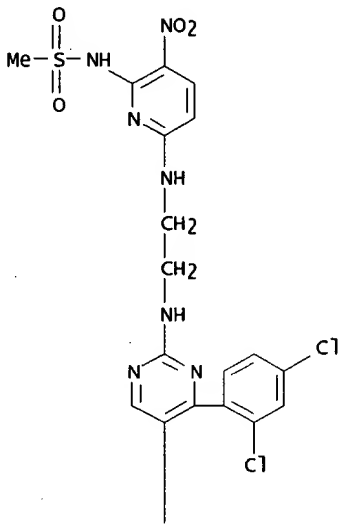

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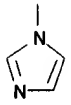
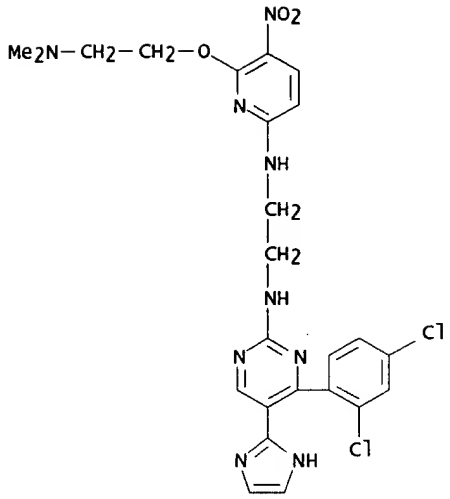
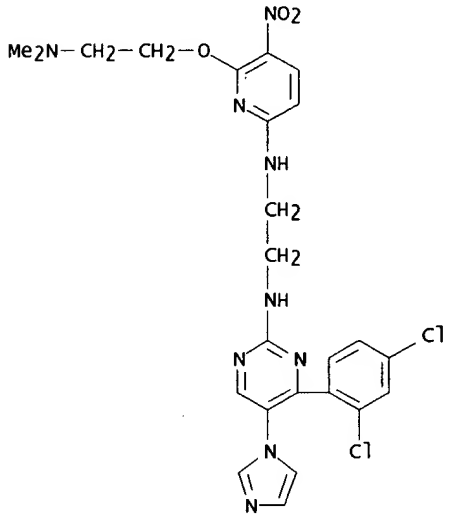


RN 252935-90-3 HCAPLUS
CN 1,2-Ethanediamine, N-[4-(2,4-dichlorophenyl)-5-(1H-imidazol-2-yl)-2-pyrimidinyl]-N'-[6-[2-(dimethylamino)ethoxy]-5-nitro-2-pyridinyl]- (9CI) (CA INDEX NAME)



RN 252935-91-4 HCAPLUS
CN 1,2-Ethanediamine, N-[4-(2,4-dichlorophenyl)-5-(1H-imidazol-1-yl)-2-pyrimidinyl]-N'-[6-[2-(dimethylamino)ethoxy]-5-nitro-2-pyridinyl]- (9CI) (CA INDEX NAME)



RN 252935-93-6 HCAPLUS
CN Ethanone, 1-[6-[[2-[[4-(2,4-dichlorophenyl)-5-(1H-imidazol-1-yl)-2-pyrimidinyl]amino]ethyl]amino]-3-pyridinyl]-, oxime, (1Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

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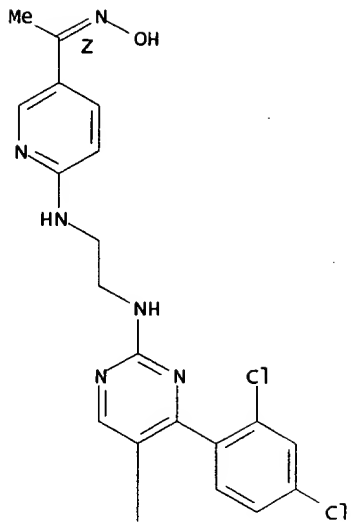

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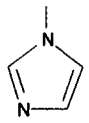
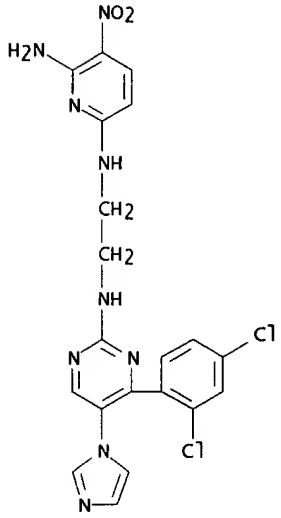
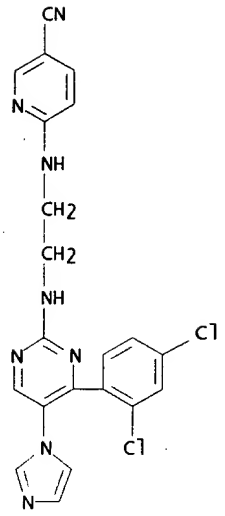


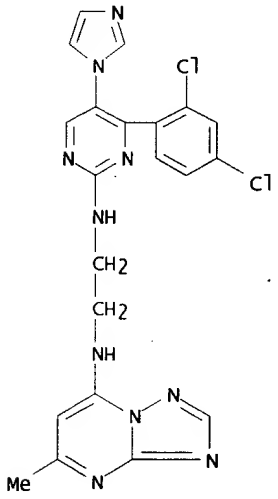
RN 252935-94-7 HCAPLUS
CN 2,6-Pyridinediamine, N6-[2-[[4-(2,4-dichlorophenyl)-5-(1H-imidazol-1-yl)-2-pyrimidinyl]amino]ethyl]-3-nitro- (9CI) (CA INDEX NAME)



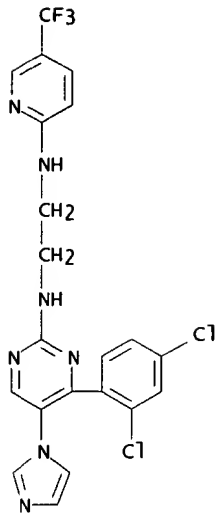
RN 252935-95-8 HCAPLUS
CN 3-Pyridinecarbonitrile, 6-[[2-[[4-(2,4-dichlorophenyl)-5-(1H-imidazol-1-yl)-2-pyrimidinyl]amino]ethyl]amino]- (9CI) (CA INDEX NAME)



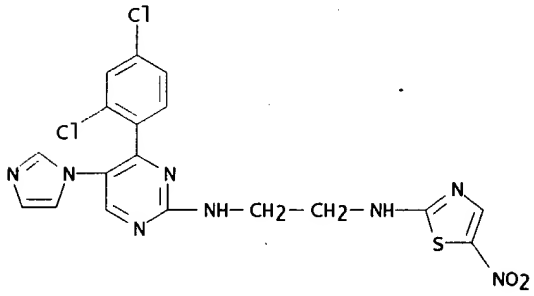
RN 252935-96-9 HCAPLUS
CN 1,2-Ethanediamine, N-[4-(2,4-dichlorophenyl)-5-(1H-imidazol-1-yl)-2-pyrimidinyl]-N'-(5-methyl[1,2,4]triazolo[1,5-a]pyrimidin-7-yl)- (9CI) (CA INDEX NAME)



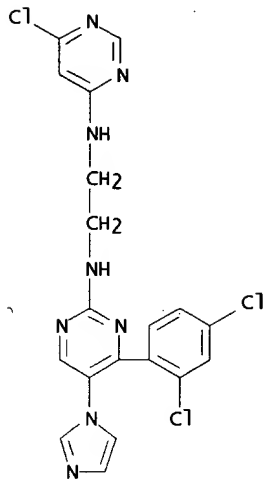
RN 252935-97-0 HCAPLUS
CN 1,2-Ethanediamine, N-[4-(2,4-dichlorophenyl)-5-(1H-imidazol-1-yl)-2-pyrimidinyl]-N'-[5-(trifluoromethyl)-2-pyridinyl]- (9CI) (CA INDEX NAME)



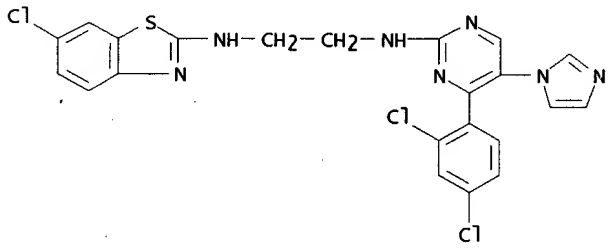
RN 252935-98-1 HCAPLUS
CN 1,2-Ethanediamine, N-[4-(2,4-dichlorophenyl)-5-(1H-imidazol-1-yl)-2-pyrimidinyl]-N'-(5-nitro-2-thiazolyl)- (9CI) (CA INDEX NAME)



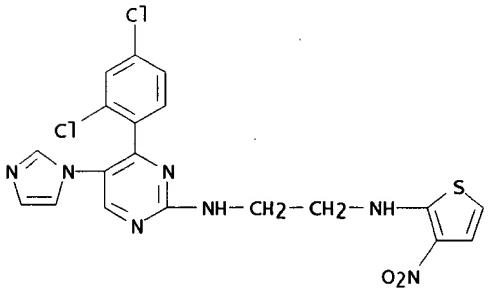
RN 252935-99-2 HCAPLUS
CN 1,2-Ethanediamine, N-(6-chloro-4-pyrimidinyl)-N'-[4-(2,4-dichlorophenyl)-5-(1H-imidazol-1-yl)-2-pyrimidinyl]- (9CI) (CA INDEX NAME)



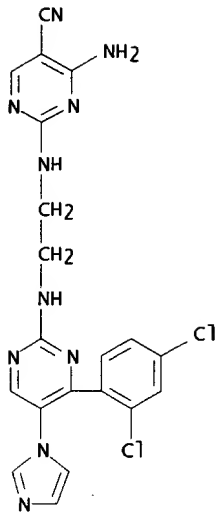
RN 252936-00-8 HCAPLUS
CN 1,2-Ethanediamine, N-(6-chloro-2-benzothiazolyl)-N'-[4-(2,4-dichlorophenyl)-5-(1H-imidazol-1-yl)-2-pyrimidinyl]- (9CI) (CA INDEX NAME)



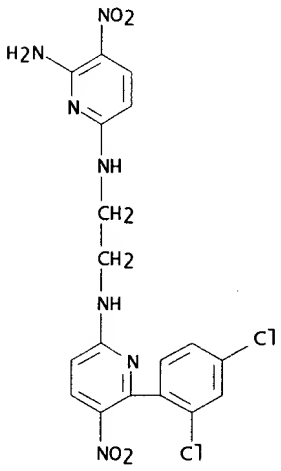
RN 252936-01-9 HCAPLUS
CN 1,2-Ethanediamine, N-[4-(2,4-dichlorophenyl)-5-(1H-imidazol-1-yl)-2-pyrimidinyl]-N'-(3-nitro-2-thienyl)- (9CI) (CA INDEX NAME)



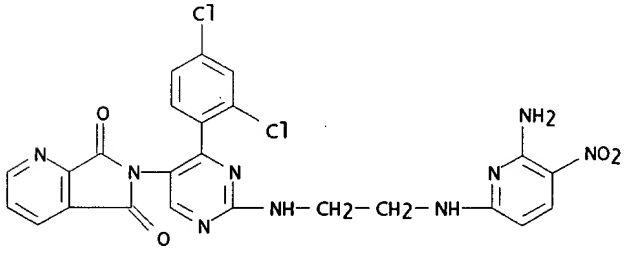
RN 252936-02-0 HCAPLUS
CN 5-Pyrimidinecarbonitrile, 4-amino-2-[[2-[[4-(2,4-dichlorophenyl)-5-(1H-imidazol-1-yl)-2-pyrimidinyl]amino]ethyl]amino]- (9CI) (CA INDEX NAME)



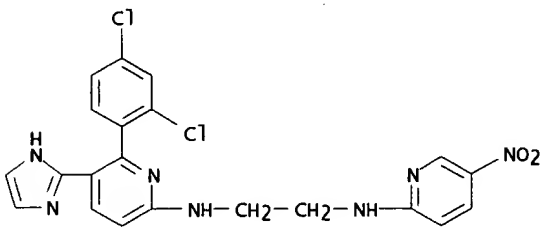
RN 252936-03-1 HCAPLUS
CN 2,6-Pyridinediamine, N6-[2-[[6-(2,4-dichlorophenyl)-5-nitro-2-pyridinyl]amino]ethyl]-3-nitro- (9CI) (CA INDEX NAME)



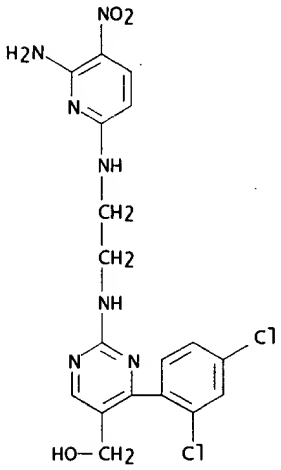
RN 252936-04-2 HCAPLUS
CN 5H-Pyrrolo[3,4-b]pyridine-5,7(6H)-dione, 6-[2-[[2-[(6-amino-5-nitro-2-pyridinyl)amino]ethyl]amino]-4-(2,4-dichlorophenyl)-5-pyrimidinyl]- (9CI) (CA INDEX NAME)



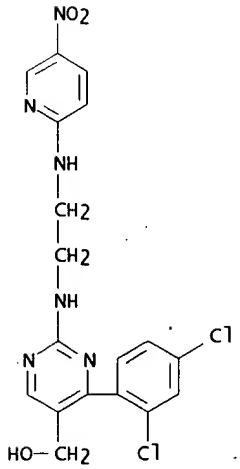
RN 252936-05-3 HCAPLUS
CN 1,2-Ethanediamine, N-[6-(2,4-dichlorophenyl)-5-(1H-imidazol-2-yl)-2-pyridinyl]-N'-(5-nitro-2-pyridinyl)- (9CI) (CA INDEX NAME)



RN 252936-06-4 HCAPLUS
CN 5-Pyrimidinemethanol, 2-[[2-[(6-amino-5-nitro-2-pyridinyl)amino]ethyl]amino]-4-(2,4-dichlorophenyl)- (9CI) (CA INDEX NAME)



RN 252936-07-5 HCAPLUS
CN 5-Pyrimidinemethanol, 4-(2,4-dichlorophenyl)-2-[[2-[(5-nitro-2-pyridinyl)amino]ethyl]amino]- (9CI) (CA INDEX NAME)



RN 252936-09-7 HCAPLUS
CN 1,2-Ethanediamine, N-[4-(2,4-dichlorophenyl)-5-(4-morpholinylmethyl)-2-pyrimidinyl]-N'-(5-nitro-2-pyridinyl)- (9CI) (CA INDEX NAME)

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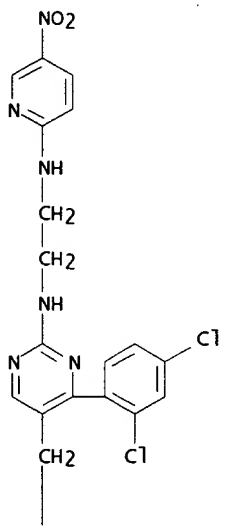

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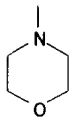

RN 252936-10-0 HCAPLUS
CN 2,6-Pyridinediamine, N6-[2-[[4-(2,4-dichlorophenyl)-5-(4-morpholinylmethyl)-2-pyrimidinyl]amino]ethyl]-3-nitro- (9CI) (CA INDEX NAME)

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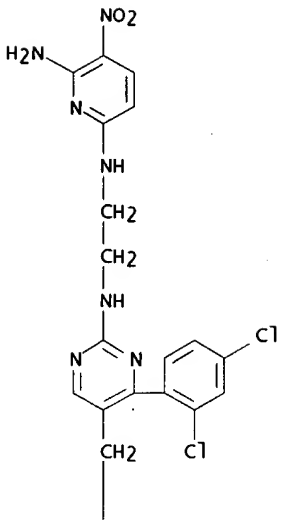

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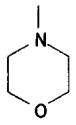
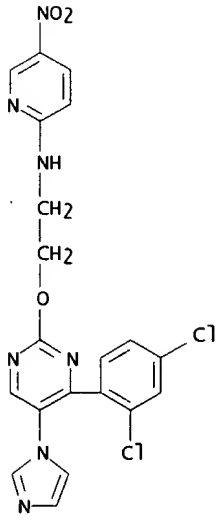
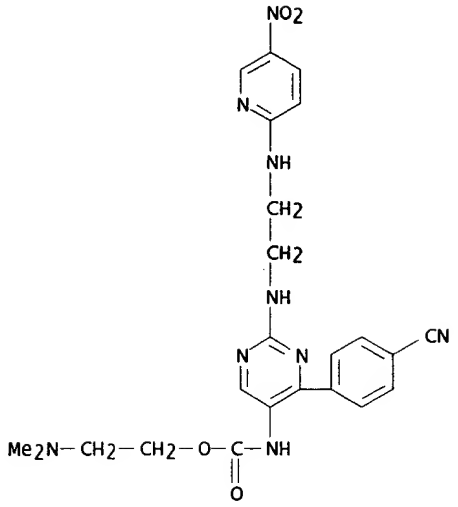


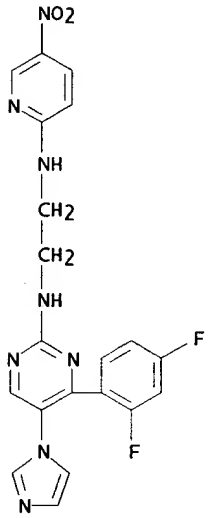
RN 252936-11-1 HCAPLUS
CN 2-Pyridinamine, N-[2-[[4-(2,4-dichlorophenyl)-5-(1H-imidazol-1-yl)-2-pyrimidinyl]oxy]ethyl]-5-nitro- (9CI) (CA INDEX NAME)



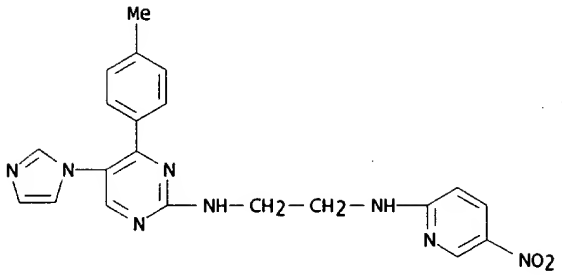
RN 252936-12-2 HCAPLUS
CN Carbamic acid, [4-(4-cyanophenyl)-2-[[2-[(5-nitro-2-pyridinyl)amino]ethyl]amino]-5-pyrimidinyl]-, 2-(dimethylamino)ethyl ester (9CI) (CA INDEX NAME)



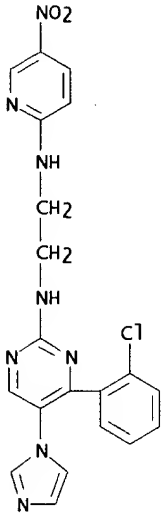
RN 252936-13-3 HCAPLUS
CN 1,2-Ethanediamine, N-[4-(2,4-difluorophenyl)-5-(1H-imidazol-1-yl)-2-pyrimidinyl]-N'-(5-nitro-2-pyridinyl)- (9CI) (CA INDEX NAME)



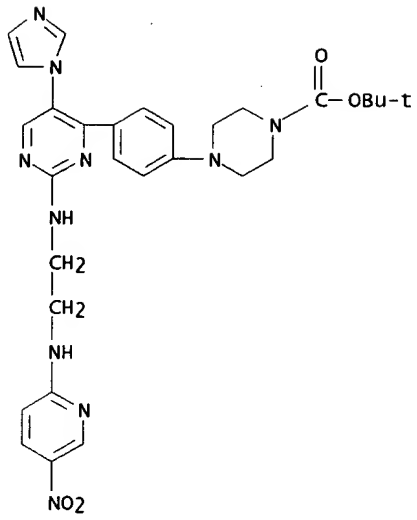
RN 252936-16-6 HCAPLUS
CN 1,2-Ethanediamine, N-[5-(1H-imidazol-1-yl)-4-(4-methylphenyl)-2-pyrimidinyl]-N'-(5-nitro-2-pyridinyl)- (9CI) (CA INDEX NAME)



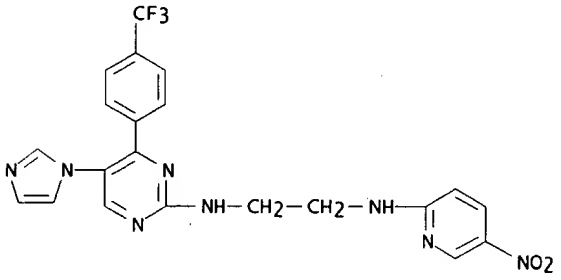
RN 252936-17-7 HCAPLUS
CN 1,2-Ethanediamine, N-[4-(2-chlorophenyl)-5-(1H-imidazol-1-yl)-2-pyrimidinyl]-N'-(5-nitro-2-pyridinyl)- (9CI) (CA INDEX NAME)



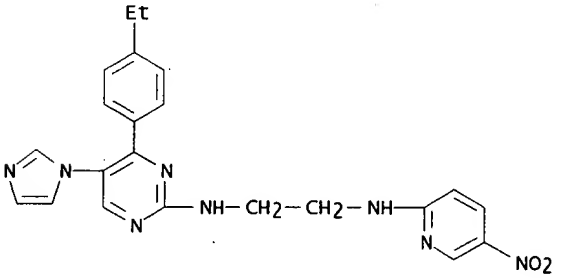
RN 252936-19-9 HCAPLUS
CN 1-Piperazinecarboxylic acid, 4-[4-[5-(1H-imidazol-1-yl)-2-[[2-[(5-nitro-2-pyridinyl)amino]ethyl]amino]-4-pyrimidinyl]phenyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



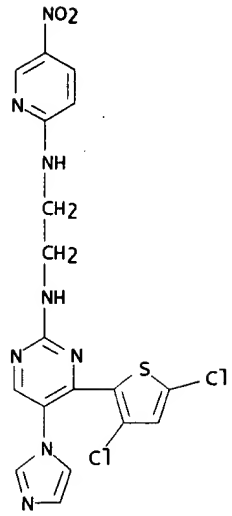
RN 252936-20-2 HCAPLUS
CN 1,2-Ethanediamine, N-[5-(1H-imidazol-1-yl)-4-[4-(trifluoromethyl)phenyl]-2-pyrimidinyl]-N'-(5-nitro-2-pyridinyl)- (9CI) (CA INDEX NAME)



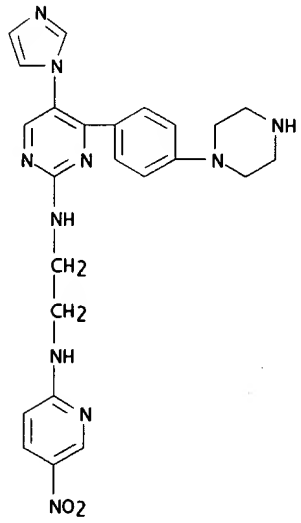
RN 252936-21-3 HCAPLUS
CN 1,2-Ethanediamine, N-[4-(4-ethylphenyl)-5-(1H-imidazol-1-yl)-2-pyrimidinyl]-N'-(5-nitro-2-pyridinyl)- (9CI) (CA INDEX NAME)



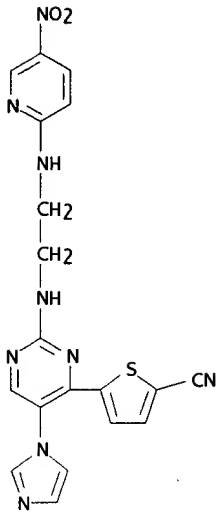
RN 252936-22-4 HCAPLUS
CN 1,2-Ethanediamine, N-[4-(3,5-dichloro-2-thienyl)-5-(1H-imidazol-1-yl)-2-pyrimidinyl]-N'-(5-nitro-2-pyridinyl)- (9CI) (CA INDEX NAME)



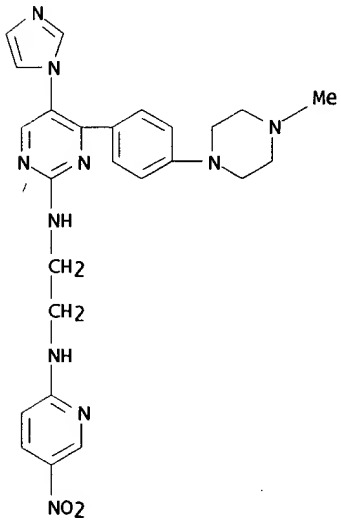
RN 252936-23-5 HCAPLUS
CN 1,2-Ethanediamine, N-[5-(1H-imidazol-1-yl)-4-[4-(1-piperazinyl)phenyl]-2-pyrimidinyl]-N'-(5-nitro-2-pyridinyl)- (9CI) (CA INDEX NAME)



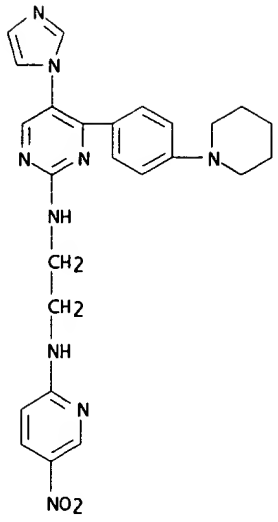
RN 252936-25-7 HCAPLUS
CN 2-Thiophenecarbonitrile, 5-[5-(1H-imidazol-1-yl)-2-[[2-[(5-nitro-2-pyridinyl)amino]ethyl]amino]-4-pyrimidinyl]- (9CI) (CA INDEX NAME)



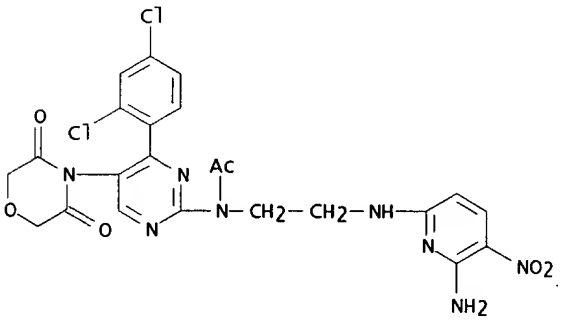
RN 252936-26-8 HCAPLUS
CN 1,2-Ethanediamine, N-[5-(1H-imidazol-1-yl)-4-[4-(4-methyl-1-piperazinyl)phenyl]-2-pyrimidinyl]-N'-(5-nitro-2-pyridinyl)- (9CI) (CA INDEX NAME)



RN 252936-27-9 HCAPLUS
CN 1,2-Ethanediamine, N-[5-(1H-imidazol-1-yl)-4-[4-(1-piperidinyl)phenyl]-2-pyrimidinyl]-N'-(5-nitro-2-pyridinyl)- (9CI) (CA INDEX NAME)



RN 252936-28-0 HCAPLUS
CN Acetamide, N-[2-[(6-amino-5-nitro-2-pyridinyl)amino]ethyl]-N-[4-(2,4-dichlorophenyl)-5-(3,5-dioxo-4-morpholinyl)-2-pyrimidinyl]- (9CI) (CA INDEX NAME)



RN 252936-30-4 HCAPLUS
CN 3,5-Morpholinedione, 4-[2-[[2-[(6-amino-5-nitro-2-pyridinyl)amino]ethyl]amino]-4-(2,4-dichlorophenyl)-5-pyrimidinyl]- (9CI) (CA INDEX NAME)

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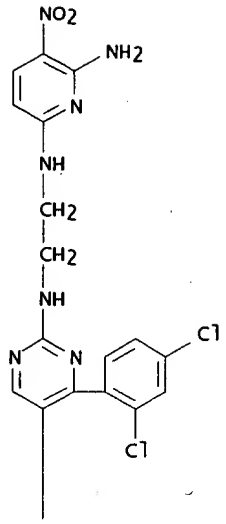

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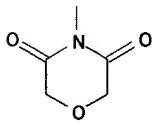
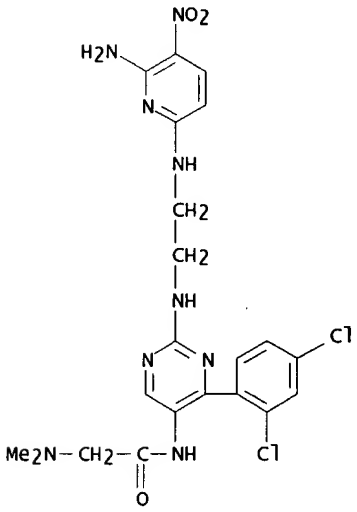


RN 252936-31-5 HCAPLUS
CN Acetamide, N-[2-[[2-[(6-amino-5-nitro-2-pyridinyl)amino]ethyl]amino]-4-(2,4-dichlorophenyl)-5-pyrimidinyl]-2-(dimethylamino)- (9CI) (CA INDEX NAME)



RN 252936-33-7 HCAPLUS
CN 3,5-Morpholinedione, 4-[4-(2,4-dichlorophenyl)-2-[[2-[(5-nitro-2-pyridinyl)amino]ethyl]amino]-5-pyrimidinyl]- (9CI) (CA INDEX NAME)

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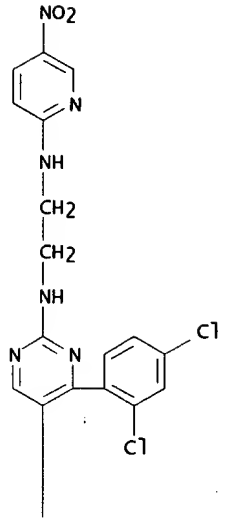

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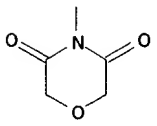
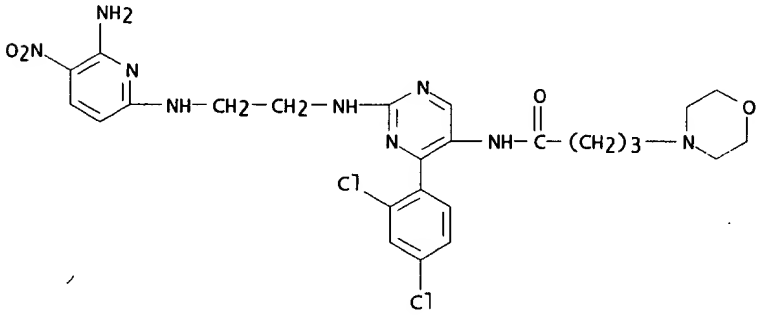


RN 252936-34-8 HCAPLUS
CN 4-Morpholinebutanamide, N-[2-[[2-[(6-amino-5-nitro-2-pyridinyl)amino]ethyl]amino]-4-(2,4-dichlorophenyl)-5-pyrimidinyl]- (9CI) (CA INDEX NAME)



RN 252936-35-9 HCAPLUS
CN 2,6-Piperazinedione, 1-[2-[[2-[(6-amino-5-nitro-2-pyridinyl)amino]ethyl]amino]-4-(2,4-dichlorophenyl)-5-pyrimidinyl]- (9CI) (CA INDEX NAME)

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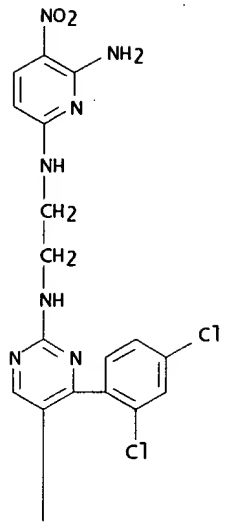

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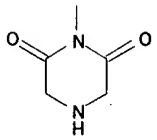
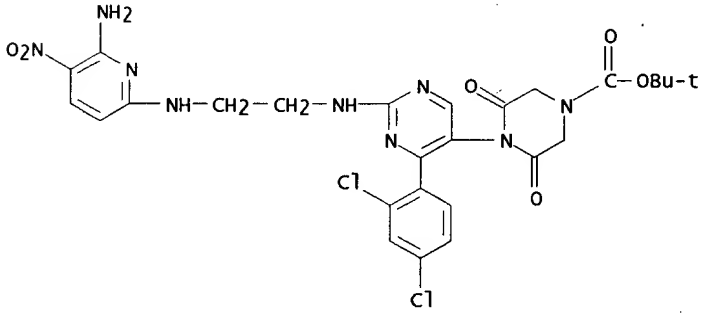
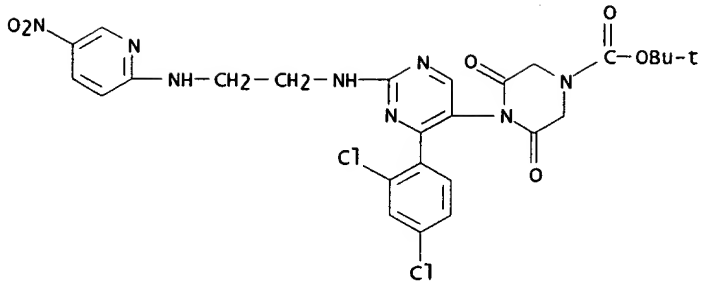


RN 252936-36-0 HCAPLUS
CN 1-Piperazinecarboxylic acid, 4-[2-[[2-[(6-amino-5-nitro-2-pyridinyl)amino]ethyl]amino]-4-(2,4-dichlorophenyl)-5-pyrimidinyl]-3,5-dioxo-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



RN 252936-37-1 HCAPLUS
CN 1-Piperazinecarboxylic acid, 4-[4-(2,4-dichlorophenyl)-2-[[2-[(5-nitro-2-pyridinyl)amino]ethyl]amino]-5-pyrimidinyl]-3,5-dioxo-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



RN 252936-38-2 HCAPLUS
CN 2,6-Piperazinedione, 1-[4-(2,4-dichlorophenyl)-2-[[2-[(5-nitro-2-pyridinyl)amino]ethyl]amino]-5-pyrimidinyl]- (9CI) (CA INDEX NAME)

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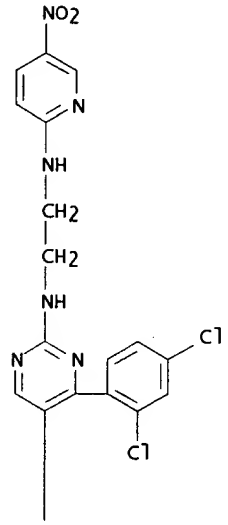

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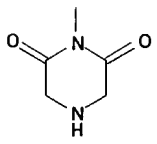
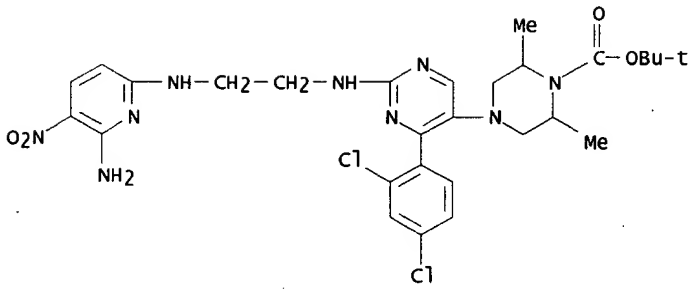
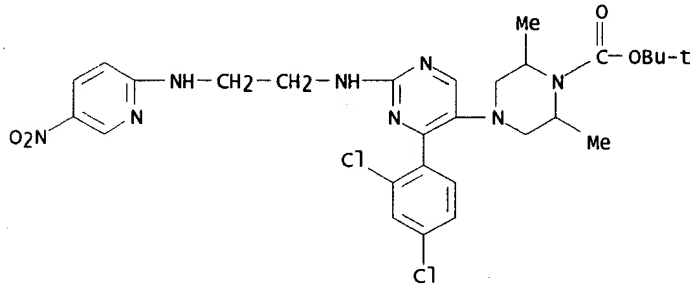


RN 252937-99-8 HCAPLUS
CN 1-Piperazinecarboxylic acid, 4-[2-[[2-[(6-amino-5-nitro-2-pyridinyl)amino]ethyl]amino]-4-(2,4-dichlorophenyl)-5-pyrimidinyl]-2,6-dimethyl-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



RN 252938-00-4 HCAPLUS
CN 1-Piperazinecarboxylic acid, 4-[4-(2,4-dichlorophenyl)-2-[[2-[(5-nitro-2-pyridinyl)amino]ethyl]amino]-5-pyrimidinyl]-2,6-dimethyl-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



RN 252938-01-5 HCAPLUS
CN 2,6-Pyridinediamine, N6-[2-[[4-(2,4-dichlorophenyl)-5-(3,5-dimethyl-1-piperazinyl)-2-pyrimidinyl]amino]ethyl]-3-nitro- (9CI) (CA INDEX NAME)

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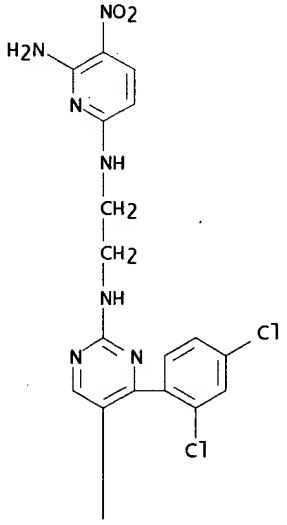

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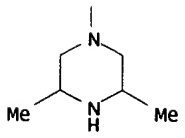

RN 252938-02-6 HCAPLUS
CN 1,2-Ethanediamine, N-[4-(2,4-dichlorophenyl)-5-(3,5-dimethyl-1-piperazinyl)-2-pyrimidinyl]-N'-(5-nitro-2-pyridinyl)- (9CI) (CA INDEX NAME)

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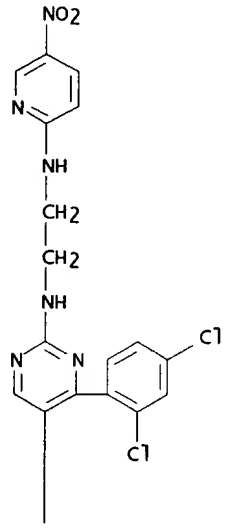

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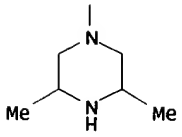
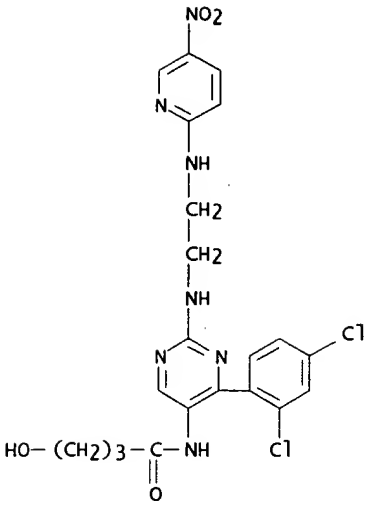


RN 252938-03-7 HCAPLUS
CN Butanamide, N-[4-(2,4-dichlorophenyl)-2-[[2-[(5-nitro-2-pyridinyl)amino]ethyl]amino]-5-pyrimidinyl]-4-hydroxy- (9CI) (CA INDEX NAME)



RN 252938-04-8 HCAPLUS
CN Pyrrolidine, 1-[(1E)-1-[[2-[[2-[(6-amino-5-nitro-2-pyridinyl)amino]ethyl]amino]-4-(2,4-dichlorophenyl)-5-pyrimidinyl]imino]ethyl]- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

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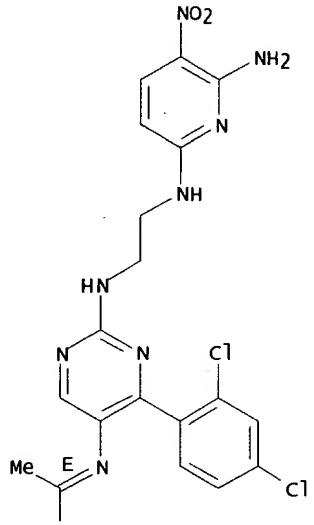

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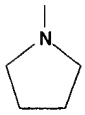
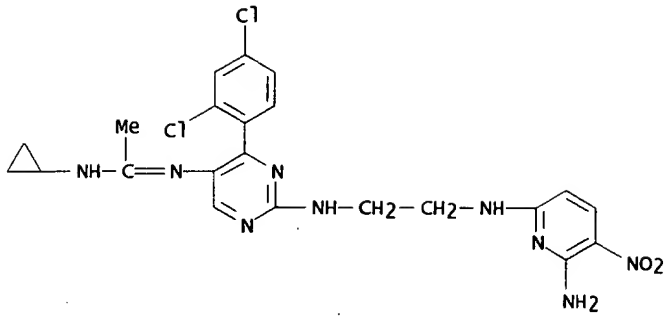


RN 252938-05-9 HCAPLUS
CN Ethanimidamide, N-[2-[[2-[(6-amino-5-nitro-2-pyridinyl)amino]ethyl]amino]-4-(2,4-dichlorophenyl)-5-pyrimidinyl]-N'-cyclopropyl- (9CI) (CA INDEX

NAME)



RN 252938-06-0 HCAPLUS
CN 2,5-Pyrrolidinedione, 1-[2-[[2-[(6-amino-5-nitro-2-pyridinyl)amino]ethyl]amino]-4-(2,4-dichlorophenyl)-5-pyrimidinyl]-3-(4-methyl-1-piperazinyl)- (9CI) (CA INDEX NAME)

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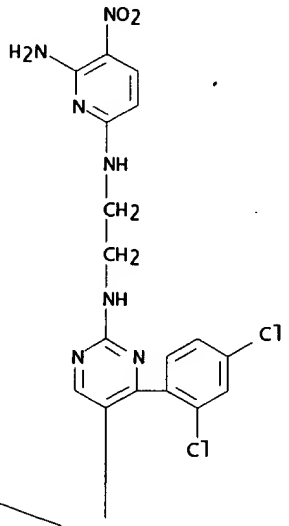

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chlorophenyl)-5-nitro-2-pyridinyl]-N'-(5-
NDEX NAME)

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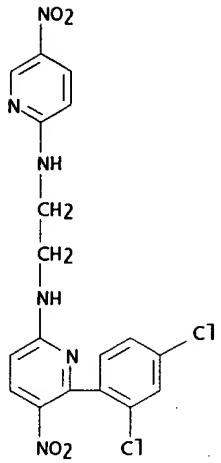
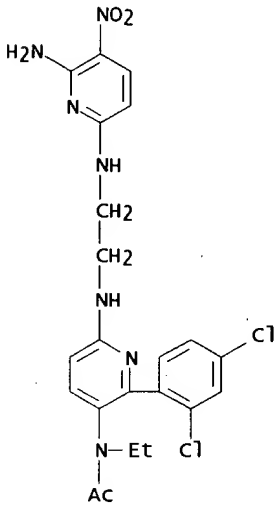
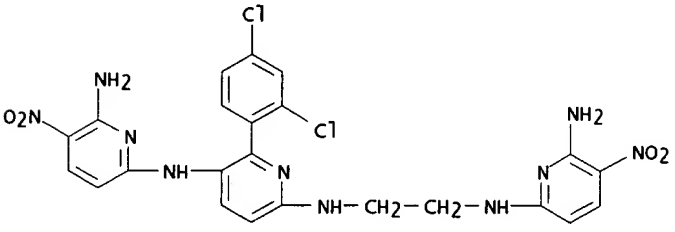


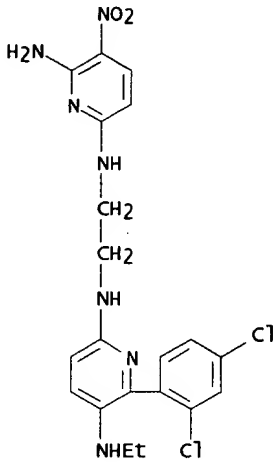
RN 252938-12-8 HCAPLUS
CN Acetamide, N-[6-[[2-[(6-amino-5-nitro-2-pyridinyl)amino]ethyl]amino]-2-(2,4-dichlorophenyl)-3-pyridinyl]-N-ethyl- (9CI) (CA INDEX NAME)



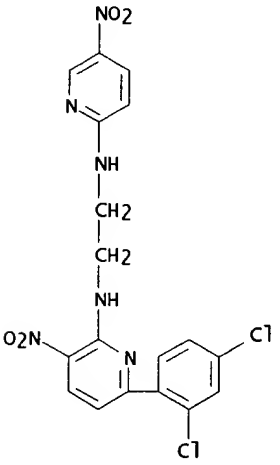
RN 252938-13-9 HCAPLUS
CN 2,5-Pyridinediamine, N5-(6-amino-5-nitro-2-pyridinyl)-N2-[2-[(6-amino-5-nitro-2-pyridinyl)amino]ethyl]-6-(2,4-dichlorophenyl)- (9CI) (CA INDEX NAME)



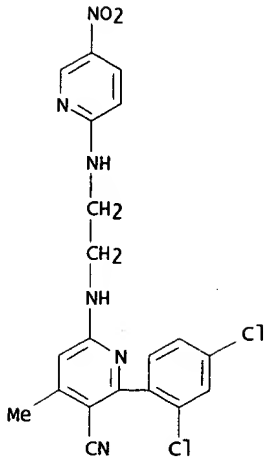
RN 252938-14-0 HCAPLUS
CN 2,5-Pyridinediamine, N2-[2-[(6-amino-5-nitro-2-pyridinyl)amino]ethyl]-6-(2,4-dichlorophenyl)-N5-ethyl- (9CI) (CA INDEX NAME)



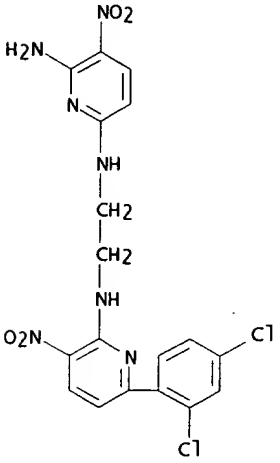
RN 252938-15-1 HCAPLUS
CN 1,2-Ethanediamine, N-[6-(2,4-dichlorophenyl)-3-nitro-2-pyridinyl]-N'-(5-nitro-2-pyridinyl)- (9CI) (CA INDEX NAME)



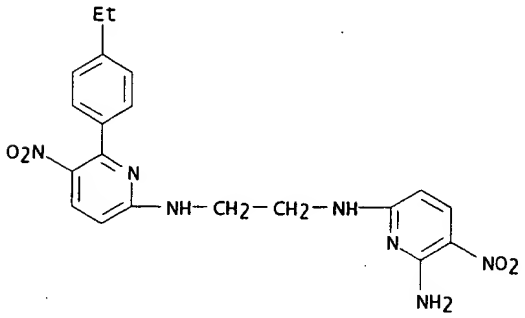
RN 252938-17-3 HCAPLUS
CN 3-Pyridinecarbonitrile, 2-(2,4-dichlorophenyl)-4-methyl-6-[[2-[(5-nitro-2-pyridinyl)amino]ethyl]amino]- (9CI) (CA INDEX NAME)



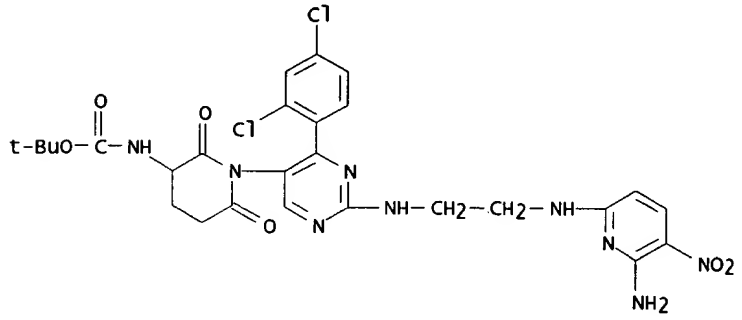
RN 252938-18-4 HCAPLUS
CN 2,6-Pyridinediamine, N6-[2-[[6-(2,4-dichlorophenyl)-3-nitro-2-pyridinyl]amino]ethyl]-3-nitro- (9CI) (CA INDEX NAME)



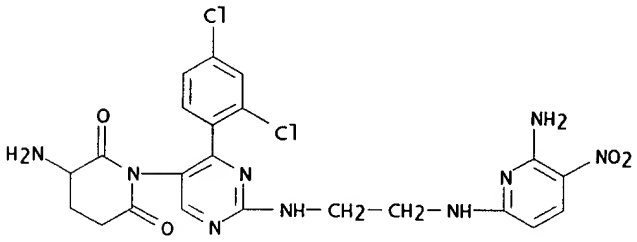
RN 252938-19-5 HCAPLUS
CN 2,6-Pyridinediamine, N6-[2-[[6-(4-ethylphenyl)-5-nitro-2-pyridinyl]amino]ethyl]-3-nitro- (9CI) (CA INDEX NAME)



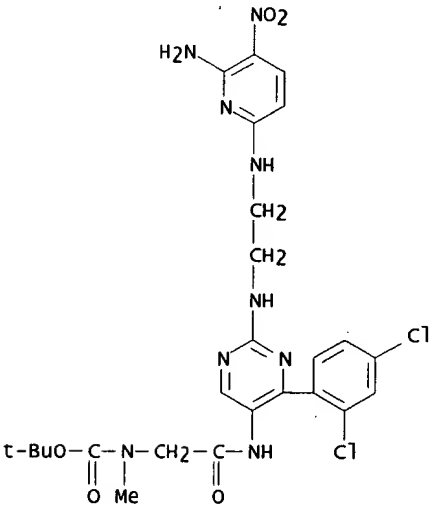
RN 252938-20-8 HCAPLUS
CN Carbamic acid, [1-[2-[[2-[(6-amino-5-nitro-2-pyridinyl)amino]ethyl]amino]-4-(2,4-dichlorophenyl)-5-pyrimidinyl]-2,6-dioxo-3-piperidinyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



RN 252938-23-1 HCAPLUS
CN 2,6-Piperidinedione, 3-amino-1-[2-[[2-[(6-amino-5-nitro-2-pyridinyl)amino]ethyl]amino]-4-(2,4-dichlorophenyl)-5-pyrimidinyl]- (9CI) (CA INDEX NAME)

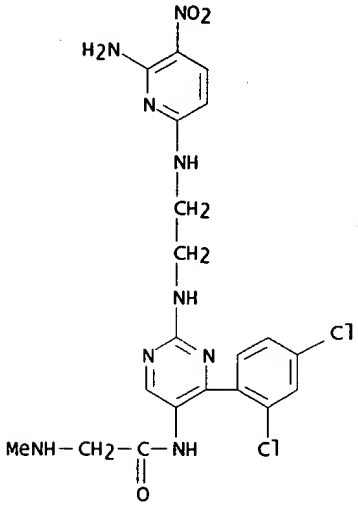


RN 252938-24-2 HCAPLUS
CN Carbamic acid, [2-[[2-[[2-[(6-amino-5-nitro-2-pyridinyl)amino]ethyl]amino]-4-(2,4-dichlorophenyl)-5-pyrimidinyl]amino]-2-oxoethyl]methyl-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

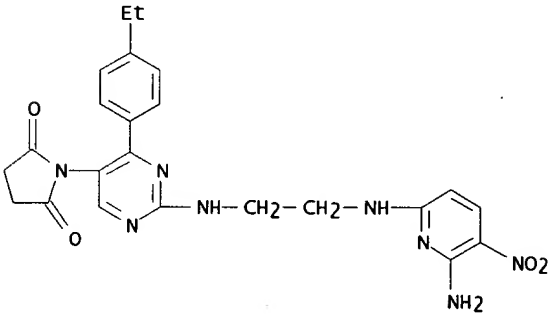


RN 252938-25-3 HCAPLUS
CN Acetamide, N-[2-[[2-[(6-amino-5-nitro-2-pyridinyl)amino]ethyl]amino]-4-

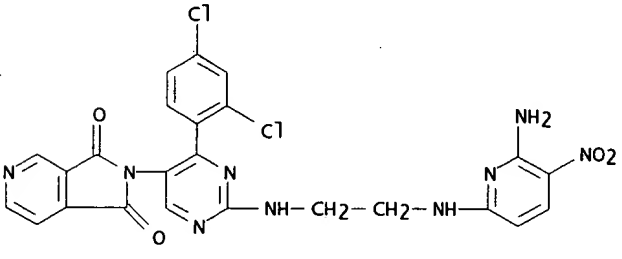
(2,4-dichlorophenyl)-5-pyrimidinyl]-2-(methylamino)- (9CI) (CA INDEX NAME)



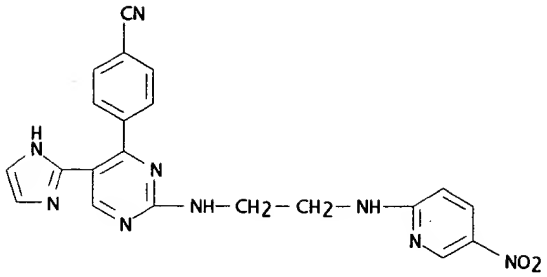
RN 252938-26-4 HCAPLUS
CN 2,5-Pyrrolidinedione, 1-[2-[[2-[(6-amino-5-nitro-2-pyridinyl)amino]ethyl]amino]-4-(4-ethylphenyl)-5-pyrimidinyl]- (9CI) (CA INDEX NAME)



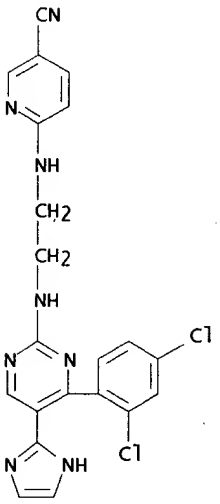
RN 252938-28-6 HCAPLUS
CN 1H-Pyrrolo[3,4-c]pyridine-1,3(2H)-dione, 2-[2-[[2-[(6-amino-5-nitro-2-pyridinyl)amino]ethyl]amino]-4-(2,4-dichlorophenyl)-5-pyrimidinyl]- (9CI) (CA INDEX NAME)



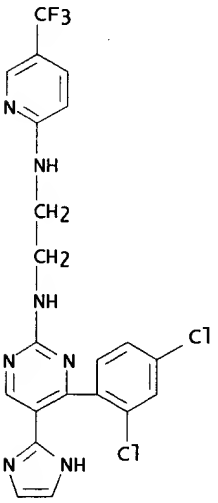
RN 252938-30-0 HCAPLUS
CN Benzonitrile, 4-[5-(1H-imidazol-2-yl)-2-[[2-[(5-nitro-2-pyridinyl)amino]ethyl]amino]-4-pyrimidinyl]- (9CI) (CA INDEX NAME)



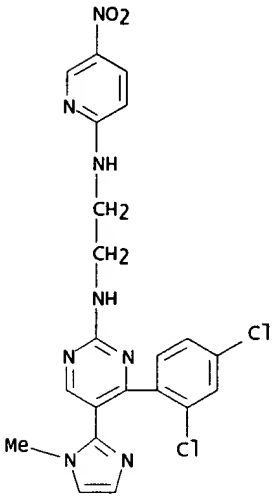
RN 252938-31-1 HCAPLUS
CN 3-Pyridinecarbonitrile, 6-[[2-[[4-(2,4-dichlorophenyl)-5-(1H-imidazol-2-yl)-2-pyrimidinyl]amino]ethyl]amino]- (9CI) (CA INDEX NAME)



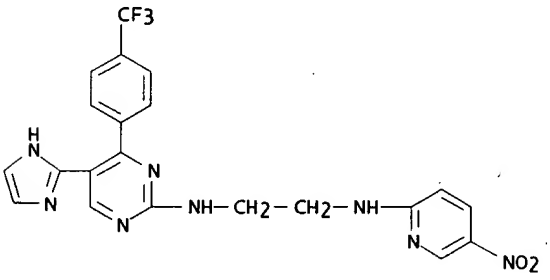
RN 252938-32-2 HCAPLUS
CN 1,2-Ethanediamine, N-[4-(2,4-dichlorophenyl)-5-(1H-imidazol-2-yl)-2-pyrimidinyl]-N'-[5-(trifluoromethyl)-2-pyridinyl]- (9CI) (CA INDEX NAME)



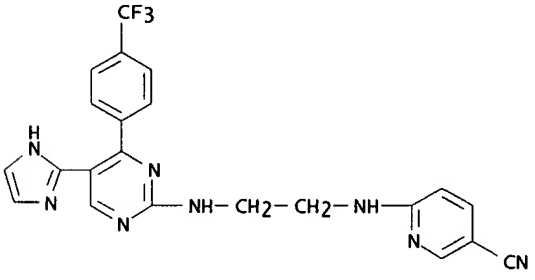
RN 252938-33-3 HCAPLUS
CN 1,2-Ethanediamine, N-[4-(2,4-dichlorophenyl)-5-(1-methyl-1H-imidazol-2-yl)-2-pyrimidinyl]-N'-(5-nitro-2-pyridinyl)- (9CI) (CA INDEX NAME)



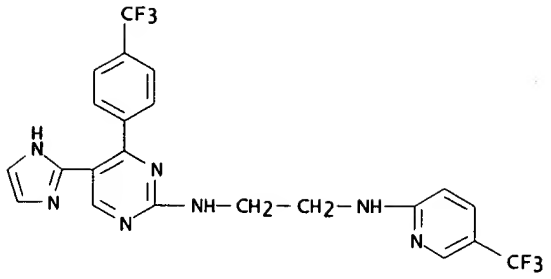
RN 252938-34-4 HCAPLUS
CN 1,2-Ethanediamine, N-[5-(1H-imidazol-2-yl)-4-[4-(trifluoromethyl)phenyl]-2-pyrimidinyl]-N'-(5-nitro-2-pyridinyl)- (9CI) (CA INDEX NAME)



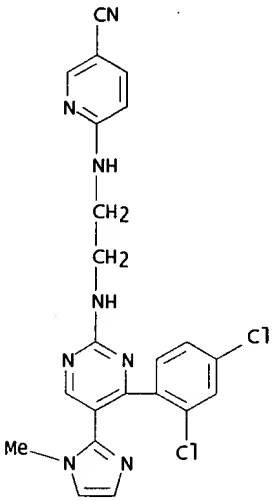
RN 252938-35-5 HCAPLUS
CN 3-Pyridinecarbonitrile, 6-[[2-[[5-(1H-imidazol-2-yl)-4-[4-(trifluoromethyl)phenyl]-2-pyrimidinyl]amino]ethyl]amino]- (9CI) (CA INDEX NAME)



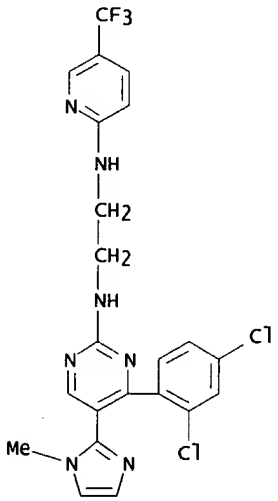
RN 252938-36-6 HCAPLUS
CN 1,2-Ethanediamine, N-[5-(1H-imidazol-2-yl)-4-[4-(trifluoromethyl)phenyl]-2-pyrimidinyl]-N'-[5-(trifluoromethyl)-2-pyridinyl]- (9CI) (CA INDEX NAME)



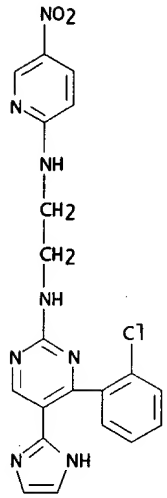
RN 252938-37-7 HCAPLUS
CN 3-Pyridinecarbonitrile, 6-[[2-[[4-(2,4-dichlorophenyl)-5-(1-methyl-1H-imidazol-2-yl)-2-pyrimidinyl]amino]ethyl]amino]- (9CI) (CA INDEX NAME)



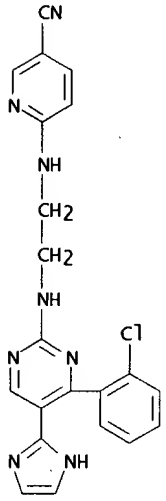
RN 252938-38-8 HCAPLUS
CN 1,2-Ethanediamine, N-[4-(2,4-dichlorophenyl)-5-(1-methyl-1H-imidazol-2-yl)-2-pyrimidinyl]-N'-[5-(trifluoromethyl)-2-pyridinyl]- (9CI) (CA INDEX NAME)



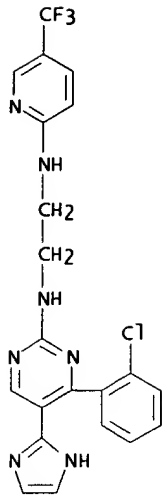
RN 252938-39-9 HCAPLUS
CN 1,2-Ethanediamine, N-[4-(2-chlorophenyl)-5-(1H-imidazol-2-yl)-2-pyrimidinyl]-N'-(5-nitro-2-pyridinyl)- (9CI) (CA INDEX NAME)



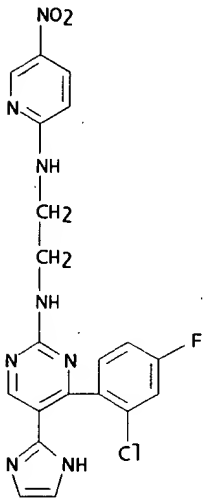
RN 252938-40-2 HCAPLUS
CN 3-Pyridinecarbonitrile, 6-[[2-[[4-(2-chlorophenyl)-5-(1H-imidazol-2-yl)-2-pyrimidinyl]amino]ethyl]amino]- (9CI) (CA INDEX NAME)



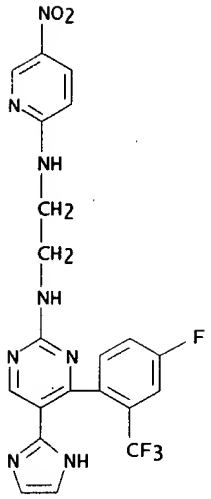
RN 252938-41-3 HCAPLUS
CN 1,2-Ethanediamine, N-[4-(2-chlorophenyl)-5-(1H-imidazol-2-yl)-2-pyrimidinyl]-N'-[5-(trifluoromethyl)-2-pyridinyl]- (9CI) (CA INDEX NAME)



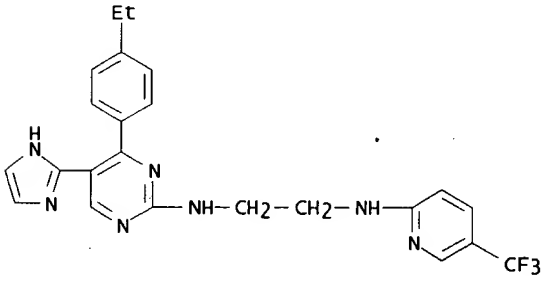
RN 252938-42-4 HCAPLUS
CN 1,2-Ethanediamine, N-[4-(2-chloro-4-fluorophenyl)-5-(1H-imidazol-2-yl)-2-pyrimidinyl]-N'-(5-nitro-2-pyridinyl)- (9CI) (CA INDEX NAME)



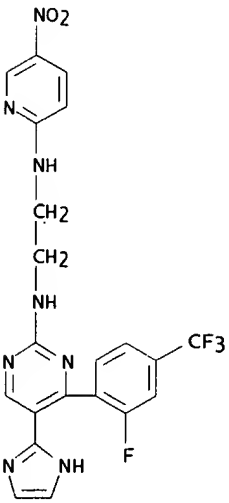
RN 252938-43-5 HCAPLUS
CN 1,2-Ethanediamine, N-[4-[4-fluoro-2-(trifluoromethyl)phenyl]-5-(1H-imidazol-2-yl)-2-pyrimidinyl]-N'-(5-nitro-2-pyridinyl)- (9CI) (CA INDEX NAME)



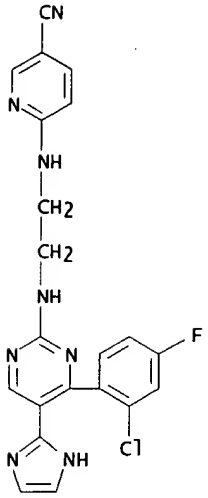
RN 252938-44-6 HCAPLUS
CN 1,2-Ethanediamine, N-[4-(4-ethylphenyl)-5-(1H-imidazol-2-yl)-2-pyrimidinyl]-N'-[5-(trifluoromethyl)-2-pyridinyl]- (9CI) (CA INDEX NAME)



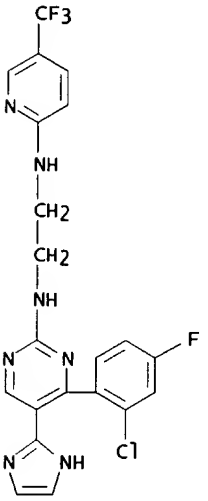
RN 252938-45-7 HCAPLUS
CN 1,2-Ethanediamine, N-[4-[2-fluoro-4-(trifluoromethyl)phenyl]-5-(1H-imidazol-2-yl)-2-pyrimidinyl]-N'-(5-nitro-2-pyridinyl)- (9CI) (CA INDEX NAME)



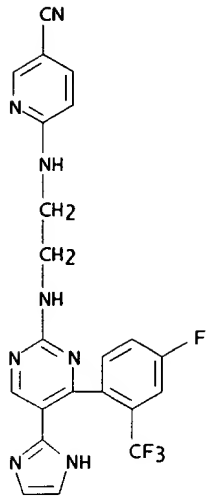
RN 252938-46-8 HCAPLUS
CN 3-Pyridinecarbonitrile, 6-[[2-[[4-(2-chloro-4-fluorophenyl)-5-(1H-imidazol-2-yl)-2-pyrimidinyl]amino]ethyl]amino]- (9CI) (CA INDEX NAME)



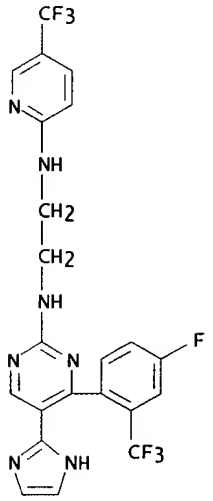
RN 252938-47-9 HCAPLUS
CN 1,2-Ethanediamine, N-[4-(2-chloro-4-fluorophenyl)-5-(1H-imidazol-2-yl)-2-pyrimidinyl]-N'-[5-(trifluoromethyl)-2-pyridinyl]- (9CI) (CA INDEX NAME)



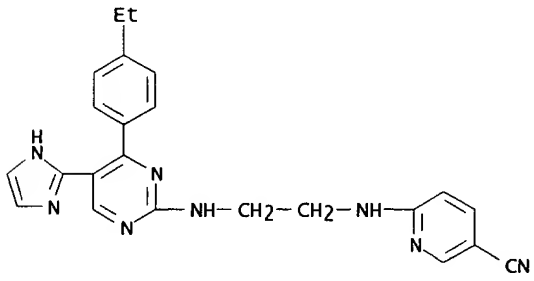
RN 252938-49-1 HCAPLUS
CN 3-Pyridinecarbonitrile, 6-[[2-[[4-[4-fluoro-2-(trifluoromethyl)phenyl]-5-(1H-imidazol-2-yl)-2-pyrimidinyl]amino]ethyl]amino]- (9CI) (CA INDEX NAME)



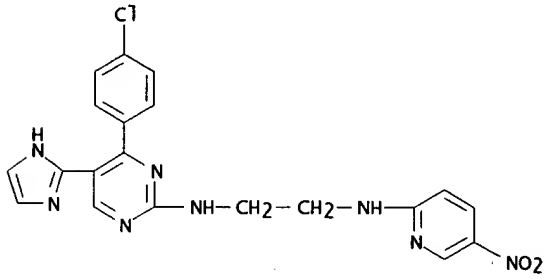
RN 252938-50-4 HCAPLUS
CN 1,2-Ethanediamine, N-[4-[4-fluoro-2-(trifluoromethyl)phenyl]-5-(1H-imidazol-2-yl)-2-pyrimidinyl]-N'-[5-(trifluoromethyl)-2-pyridinyl]- (9CI) (CA INDEX NAME)



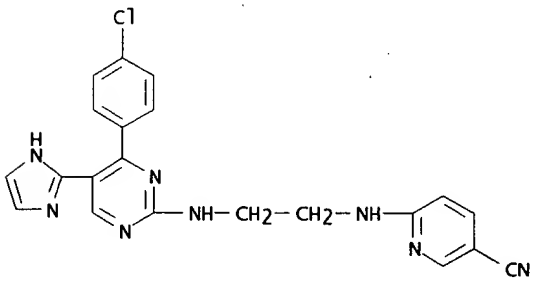
RN 252938-51-5 HCAPLUS
CN 3-Pyridinecarbonitrile, 6-[[2-[[4-(4-ethylphenyl)-5-(1H-imidazol-2-yl)-2-pyrimidinyl]amino]ethyl]amino]- (9CI) (CA INDEX NAME)



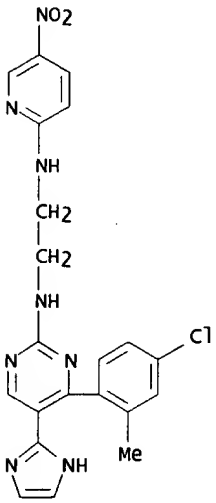
RN 252938-52-6 HCAPLUS
CN 1,2-Ethanediamine, N-[4-(4-chlorophenyl)-5-(1H-imidazol-2-yl)-2-pyrimidinyl]-N'-(5-nitro-2-pyridinyl)- (9CI) (CA INDEX NAME)



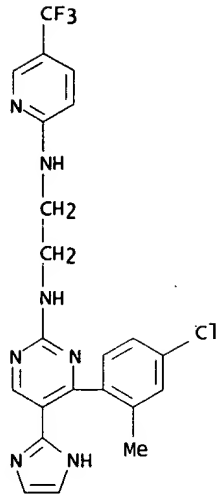
RN 252938-53-7 HCAPLUS
CN 3-Pyridinecarbonitrile, 6-[[2-[[4-(4-chlorophenyl)-5-(1H-imidazol-2-yl)-2-pyrimidinyl]amino]ethyl]amino]- (9CI) (CA INDEX NAME)



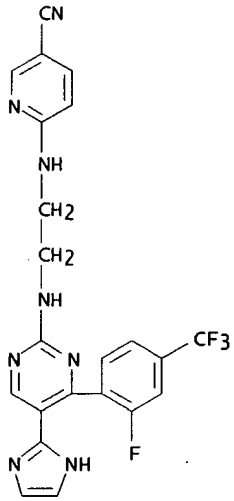
RN 252938-54-8 HCAPLUS
CN 1,2-Ethanediamine, N-[4-(4-chloro-2-methylphenyl)-5-(1H-imidazol-2-yl)-2-pyrimidinyl]-N'-(5-nitro-2-pyridinyl)- (9CI) (CA INDEX NAME)



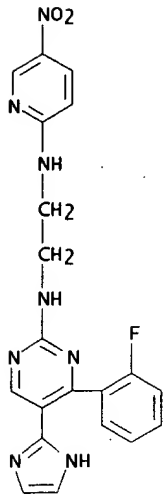
RN 252938-55-9 HCAPLUS
CN 1,2-Ethanediamine, N-[4-(4-chloro-2-methylphenyl)-5-(1H-imidazol-2-yl)-2-pyrimidinyl]-N'-[5-(trifluoromethyl)-2-pyridinyl]- (9CI) (CA INDEX NAME)



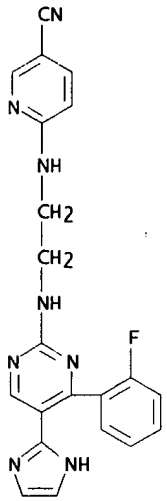
RN 252941-97-2 HCAPLUS
CN 3-Pyridinecarbonitrile, 6-[[2-[[4-[2-fluoro-4-(trifluoromethyl)phenyl]-5-(1H-imidazol-2-yl)-2-pyrimidinyl]amino]ethyl]amino]- (9CI) (CA INDEX NAME)



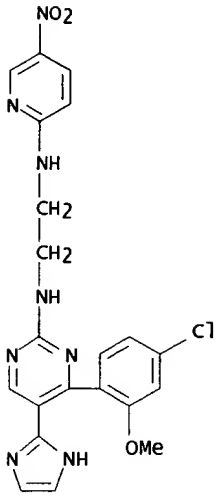
RN 252941-98-3 HCAPLUS
CN 1,2-Ethanediamine, N-[4-(2-fluorophenyl)-5-(1H-imidazol-2-yl)-2-pyrimidinyl]-N'-(5-nitro-2-pyridinyl)- (9CI) (CA INDEX NAME)



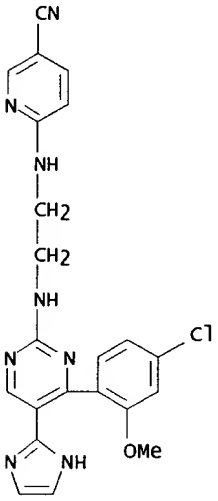
RN 252941-99-4 HCAPLUS
CN 3-Pyridinecarbonitrile, 6-[[2-[[4-(2-fluorophenyl)-5-(1H-imidazol-2-yl)-2-pyrimidinyl]amino]ethyl]amino]- (9CI) (CA INDEX NAME)



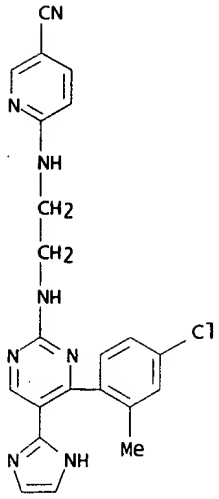
RN 252942-00-0 HCAPLUS
CN 1,2-Ethanediamine, N-[4-(4-chloro-2-methoxyphenyl)-5-(1H-imidazol-2-yl)-2-pyrimidinyl]-N'-(5-nitro-2-pyridinyl)- (9CI) (CA INDEX NAME)



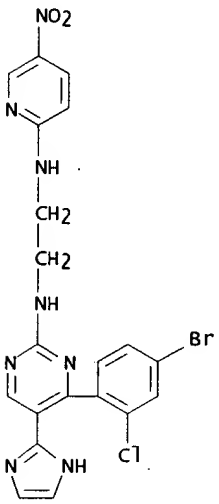
RN 252942-01-1 HCAPLUS
CN 3-Pyridinecarbonitrile, 6-[[2-[[4-(4-chloro-2-methoxyphenyl)-5-(1H-imidazol-2-yl)-2-pyrimidinyl]amino]ethyl]amino]- (9CI) (CA INDEX NAME)



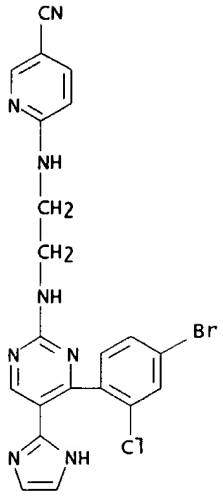
RN 252942-02-2 HCAPLUS
CN 3-Pyridinecarbonitrile, 6-[[2-[[4-(4-chloro-2-methylphenyl)-5-(1H-imidazol-2-yl)-2-pyrimidinyl]amino]ethyl]amino]- (9CI) (CA INDEX NAME)



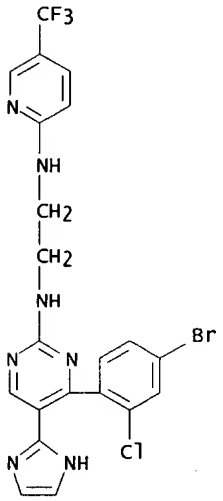
RN 252942-03-3 HCAPLUS
CN 1,2-Ethanediamine, N-[4-(4-bromo-2-chlorophenyl)-5-(1H-imidazol-2-yl)-2-pyrimidinyl]-N'-(5-nitro-2-pyridinyl)- (9CI) (CA INDEX NAME)



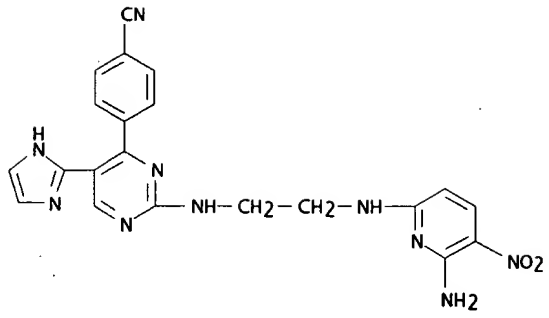
RN 252942-04-4 HCAPLUS
CN 3-Pyridinecarbonitrile, 6-[[2-[[4-(4-bromo-2-chlorophenyl)-5-(1H-imidazol-2-yl)-2-pyrimidinyl]amino]ethyl]amino]- (9CI) (CA INDEX NAME)



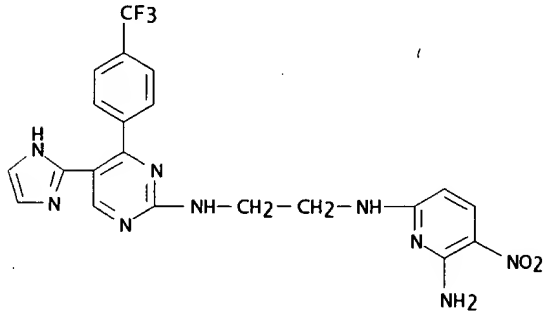
RN 252942-05-5 HCAPLUS
CN 1,2-Ethanediamine, N-[4-(4-bromo-2-chlorophenyl)-5-(1H-imidazol-2-yl)-2-pyrimidinyl]-N'-[5-(trifluoromethyl)-2-pyridinyl]- (9CI) (CA INDEX NAME)



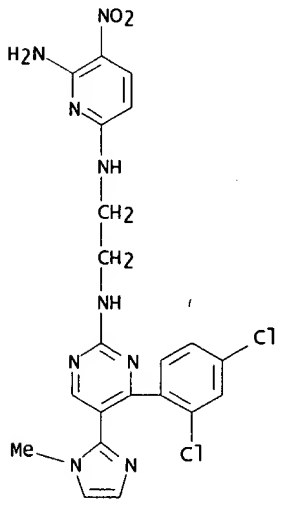
RN 252942-06-6 HCAPLUS
CN Benzonitrile, 4-[2-[[2-[(6-amino-5-nitro-2-pyridinyl)amino]ethyl]amino]-5-(1H-imidazol-2-yl)-4-pyrimidinyl]- (9CI) (CA INDEX NAME)



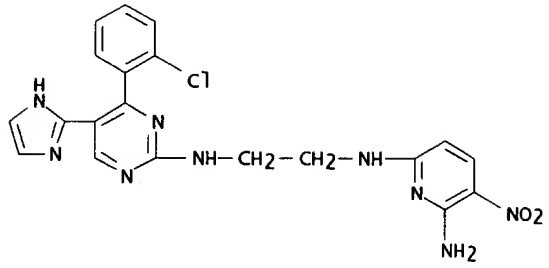
RN 252942-07-7 HCAPLUS
CN 1,2-Ethanediamine, N-(6-amino-5-nitro-2-pyridinyl)-N'-[5-(1H-imidazol-2-yl)-4-[4-(trifluoromethyl)phenyl]-2-pyrimidinyl]- (9CI) (CA INDEX NAME)



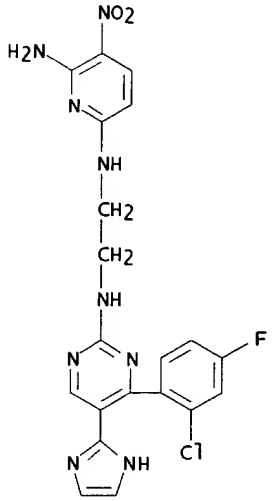
RN 252942-08-8 HCAPLUS
CN 2,6-Pyridinediamine, N6-[2-[[4-(2,4-dichlorophenyl)-5-(1-methyl-1H-imidazol-2-yl)-2-pyrimidinyl]amino]ethyl]-3-nitro- (9CI) (CA INDEX NAME)



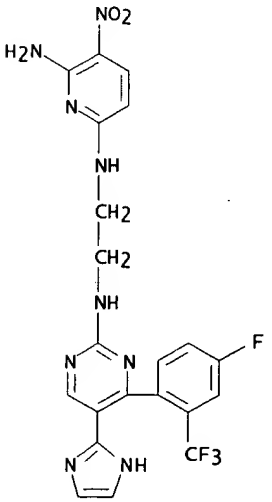
RN 252942-09-9 HCAPLUS
CN 1,2-Ethanediamine, N-(6-amino-5-nitro-2-pyridinyl)-N'-[4-(2-chlorophenyl)-5-(1H-imidazol-2-yl)-2-pyrimidinyl]- (9CI) (CA INDEX NAME)



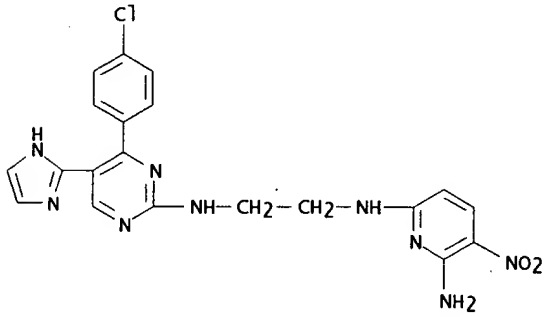
RN 252942-10-2 HCAPLUS
CN 1,2-Ethanediamine, N-(6-amino-5-nitro-2-pyridinyl)-N'-[4-(2-chloro-4-fluorophenyl)-5-(1H-imidazol-2-yl)-2-pyrimidinyl]- (9CI) (CA INDEX NAME)



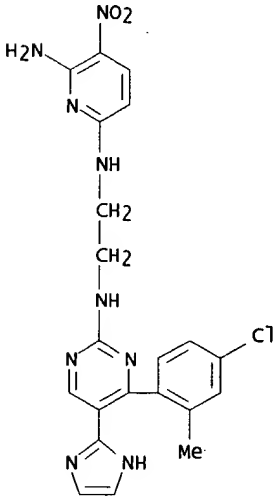
RN 252942-11-3 HCAPLUS
CN 1,2-Ethanediamine, N-(6-amino-5-nitro-2-pyridinyl)-N'-[4-[4-fluoro-2-(trifluoromethyl)phenyl]-5-(1H-imidazol-2-yl)-2-pyrimidinyl]- (9CI) (CA INDEX NAME)



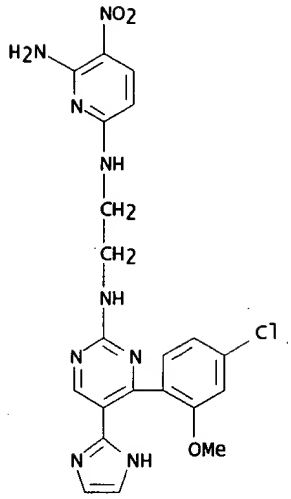
RN 252942-12-4 HCAPLUS
CN 1,2-Ethanediamine, N-(6-amino-5-nitro-2-pyridinyl)-N'-[4-(4-chlorophenyl)-5-(1H-imidazol-2-yl)-2-pyrimidinyl]- (9CI) (CA INDEX NAME)



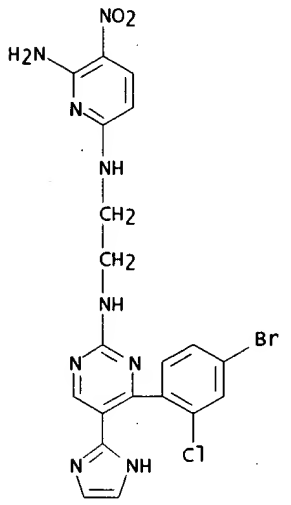
RN 252942-13-5 HCAPLUS
CN 1,2-Ethanediamine, N-(6-amino-5-nitro-2-pyridinyl)-N'-[4-(4-chloro-2-methylphenyl)-5-(1H-imidazol-2-yl)-2-pyrimidinyl]- (9CI) (CA INDEX NAME)



RN 252942-14-6 HCAPLUS
CN 1,2-Ethanediamine, N-(6-amino-5-nitro-2-pyridinyl)-N'-[4-(4-chloro-2-methoxyphenyl)-5-(1H-imidazol-2-yl)-2-pyrimidinyl]- (9CI) (CA INDEX NAME)



RN 252942-15-7 HCAPLUS
CN 1,2-Ethanediamine, N-(6-amino-5-nitro-2-pyridinyl)-N'-[4-(4-bromo-2-chlorophenyl)-5-(1H-imidazol-2-yl)-2-pyrimidinyl]- (9CI) (CA INDEX NAME)



RN 252942-16-8 HCAPLUS
CN 1,2-Ethanediamine, N-(6-amino-5-nitro-2-pyridinyl)-N'-[4-(4-bromo-2-chlorophenyl)-5-(4-methyl-1H-imidazol-2-yl)-2-pyrimidinyl]- (9CI) (CA INDEX NAME)

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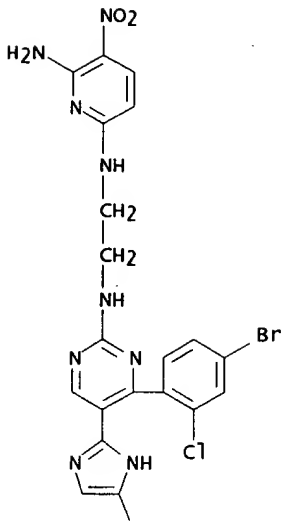

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RN 252942-17-9 HCAPLUS
CN 3-Pyridinecarbonitrile, 6-[[2-[[4-(4-bromo-2-chlorophenyl)-5-(4-methyl-1H-imidazol-2-yl)-2-pyrimidinyl]amino]ethyl]amino]- (9CI) (CA INDEX NAME)

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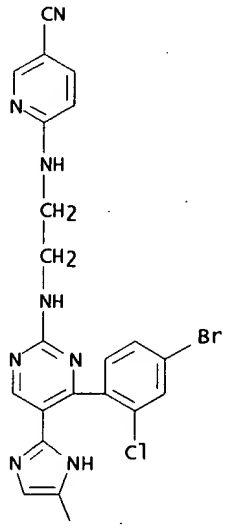

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RN 252942-18-0 HCAPLUS
CN 1,2-Ethanediamine, N-(6-amino-5-nitro-2-pyridinyl)-N'-[4-(2-chloro-4-fluorophenyl)-5-(4-methyl-1H-imidazol-2-yl)-2-pyrimidinyl]- (9CI) (CA INDEX NAME)

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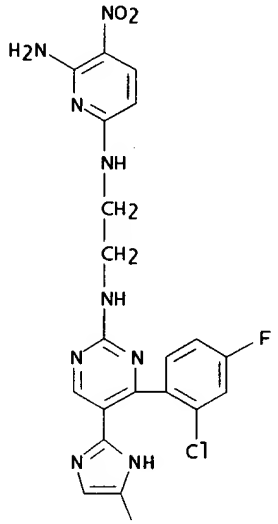

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RN 252942-19-1 HCAPLUS
CN 3-Pyridinecarbonitrile, 6-[[2-[[4-(2-chloro-4-fluorophenyl)-5-(4-methyl-1H-imidazol-2-yl)-2-pyrimidinyl]amino]ethyl]amino]- (9CI) (CA INDEX NAME)

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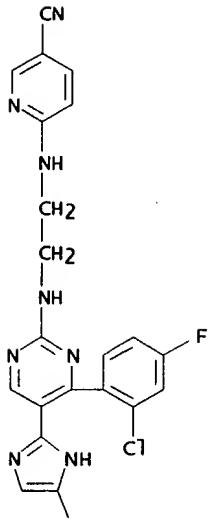

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RN 252942-20-4 HCAPLUS
CN 1,2-Ethanediamine, N-[4-(2,4-dichlorophenyl)-5-(4-methyl-1H-imidazol-2-yl)-2-pyrimidinyl]-N'-(5-nitro-2-pyridinyl)- (9CI) (CA INDEX NAME)

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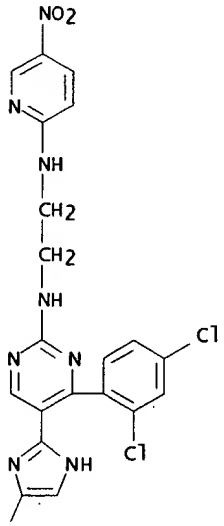

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Me

RN 252942-21-5 HCAPLUS
CN 1,2-Ethanediamine, N-(6-amino-5-nitro-2-pyridinyl)-N'-[4-(2,4-dichlorophenyl)-5-(4-methyl-1H-imidazol-2-yl)-2-pyrimidinyl]- (9CI) (CA INDEX NAME)

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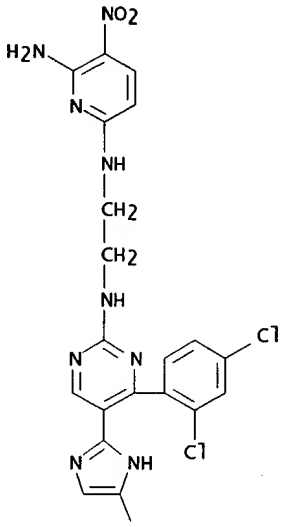

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Me

RN 252942-22-6 HCAPLUS
CN 1,2-Ethanediamine, N-[4-(2,4-dichlorophenyl)-5-(4-methyl-1H-imidazol-2-yl)-2-pyrimidinyl]-N'-[5-(trifluoromethyl)-2-pyridinyl]- (9CI) (CA INDEX NAME)

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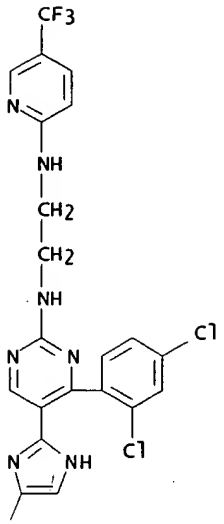

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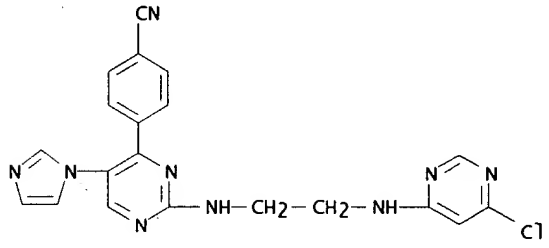
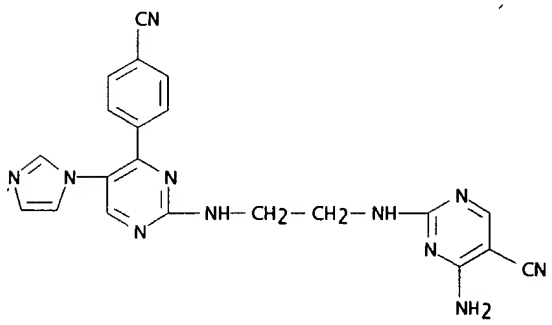
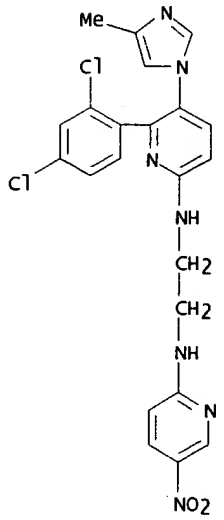
RN 252942-23-7 HCAPLUS
CN Benzonitrile, 4-[2-[[2-[(6-chloro-4-pyrimidinyl)amino]ethyl]amino]-5-(1H-imidazol-1-yl)-4-pyrimidinyl]- (9CI) (CA INDEX NAME)



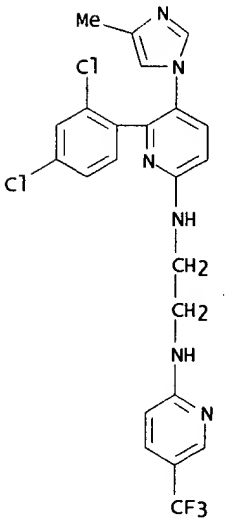
RN 252942-24-8 HCAPLUS
CN 5-Pyrimidinecarbonitrile, 4-amino-2-[[2-[[4-(4-cyanophenyl)-5-(1H-imidazol-1-yl)-2-pyrimidinyl]amino]ethyl]amino]- (9CI) (CA INDEX NAME)



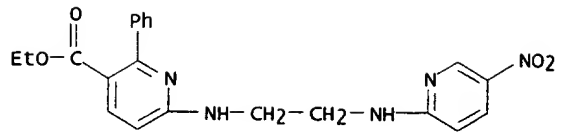
RN 252942-25-9 HCAPLUS
CN 1,2-Ethanediamine, N-[6-(2,4-dichlorophenyl)-5-(4-methyl-1H-imidazol-1-yl)-2-pyridinyl]-N'-(5-nitro-2-pyridinyl)- (9CI) (CA INDEX NAME)



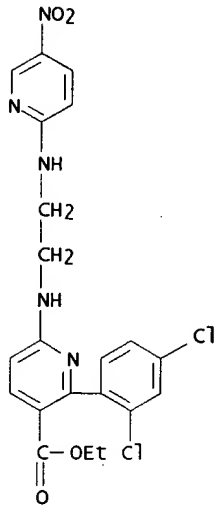
RN 252942-26-0 HCAPLUS
CN 1,2-Ethanediamine, N-[6-(2,4-dichlorophenyl)-5-(4-methyl-1H-imidazol-1-yl)-2-pyridinyl]-N'-[5-(trifluoromethyl)-2-pyridinyl]- (9CI) (CA INDEX NAME)



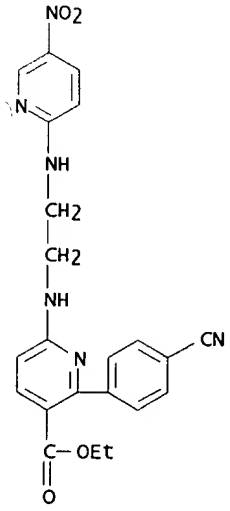
RN 252942-27-1 HCAPLUS
CN 3-Pyridinecarboxylic acid, 6-[[2-[(5-nitro-2-pyridinyl)amino]ethyl]amino]-2-phenyl-, ethyl ester (9CI) (CA INDEX NAME)



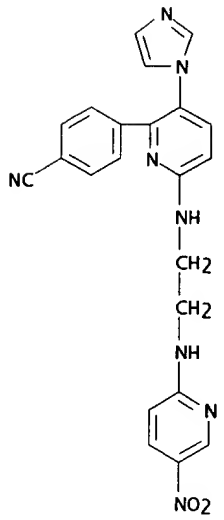
RN 252942-28-2 HCAPLUS
CN 3-Pyridinecarboxylic acid, 2-(2,4-dichlorophenyl)-6-[[2-[(5-nitro-2-pyridinyl)amino]ethyl]amino]-, ethyl ester (9CI) (CA INDEX NAME)



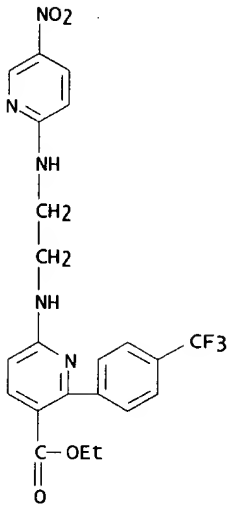
RN 252942-29-3 HCAPLUS
CN 3-Pyridinecarboxylic acid, 2-(4-cyanophenyl)-6-[[2-[(5-nitro-2-pyridinyl)amino]ethyl]amino]-, ethyl ester (9CI) (CA INDEX NAME)



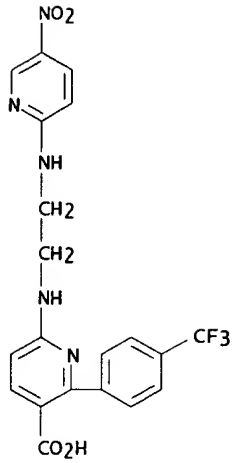
RN 252942-30-6 HCAPLUS
CN Benzonitrile, 4-[3-(1H-imidazol-1-yl)-6-[[2-[(5-nitro-2-pyridinyl)amino]ethyl]amino]-2-pyridinyl]- (9CI) (CA INDEX NAME)



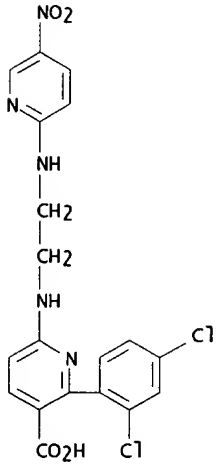
RN 252942-31-7 HCAPLUS
CN 3-Pyridinecarboxylic acid, 6-[[2-[(5-nitro-2-pyridinyl)amino]ethyl]amino]-2-[4-(trifluoromethyl)phenyl]-, ethyl ester (9CI) (CA INDEX NAME)



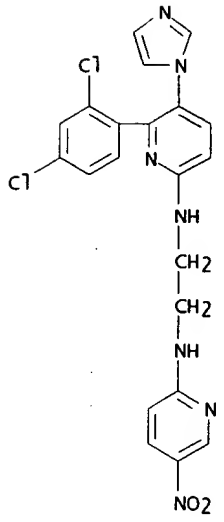
RN 252942-32-8 HCAPLUS
CN 3-Pyridinecarboxylic acid, 6-[[2-[(5-nitro-2-pyridinyl)amino]ethyl]amino]-2-[4-(trifluoromethyl)phenyl]- (9CI) (CA INDEX NAME)



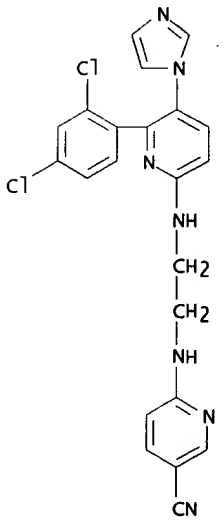
RN 252942-33-9 HCAPLUS
CN 3-Pyridinecarboxylic acid, 2-(2,4-dichlorophenyl)-6-[[2-[(5-nitro-2-pyridinyl)amino]ethyl]amino]- (9CI) (CA INDEX NAME)



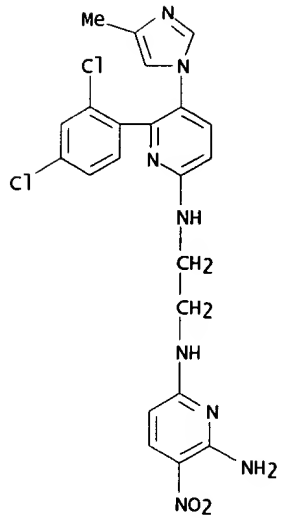
RN 252942-34-0 HCAPLUS
CN 1,2-Ethanediamine, N-[6-(2,4-dichlorophenyl)-5-(1H-imidazol-1-yl)-2-pyridinyl]-N'-(5-nitro-2-pyridinyl)- (9CI) (CA INDEX NAME)



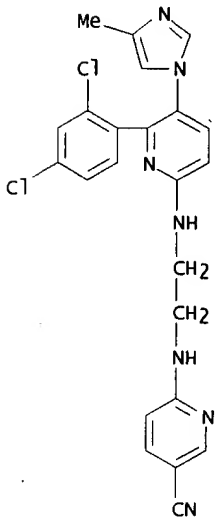
RN 252942-35-1 HCAPLUS
CN 3-Pyridinecarbonitrile, 6-[[2-[[6-(2,4-dichlorophenyl)-5-(1H-imidazol-1-yl)-2-pyridinyl]amino]ethyl]amino]- (9CI) (CA INDEX NAME)



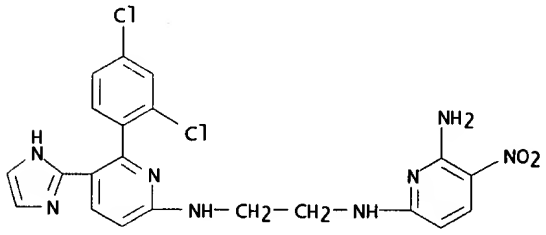
RN 252942-37-3 HCAPLUS
CN 2,6-Pyridinediamine, N6-[2-[[6-(2,4-dichlorophenyl)-5-(4-methyl-1H-imidazol-1-yl)-2-pyridinyl]amino]ethyl]-3-nitro- (9CI) (CA INDEX NAME)



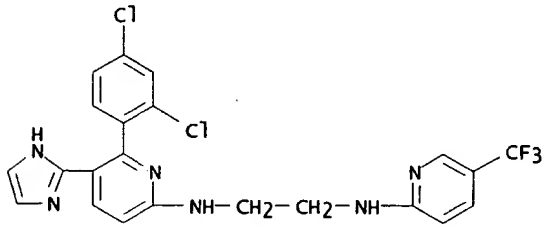
RN 252942-38-4 HCAPLUS
CN 3-Pyridinecarbonitrile, 6-[[2-[[6-(2,4-dichlorophenyl)-5-(4-methyl-1H-imidazol-1-yl)-2-pyridinyl]amino]ethyl]amino]- (9CI) (CA INDEX NAME)



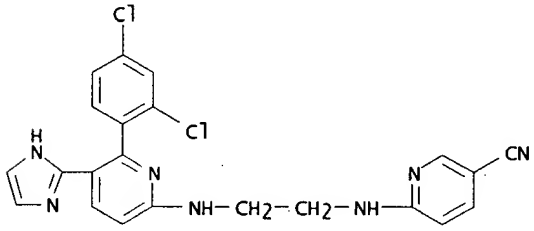
RN 252942-39-5 HCAPLUS
CN 1,2-Ethanediamine, N-(6-amino-5-nitro-2-pyridinyl)-N'-[6-(2,4-dichlorophenyl)-5-(1H-imidazol-2-yl)-2-pyridinyl]- (9CI) (CA INDEX NAME)



RN 252942-40-8 HCAPLUS
CN 1,2-Ethanediamine, N-[6-(2,4-dichlorophenyl)-5-(1H-imidazol-2-yl)-2-pyridinyl]-N'-[5-(trifluoromethyl)-2-pyridinyl]- (9CI) (CA INDEX NAME)



RN 252942-41-9 HCAPLUS
CN 3-Pyridinecarbonitrile, 6-[[2-[[6-(2,4-dichlorophenyl)-5-(1H-imidazol-2-yl)-2-pyridinyl]amino]ethyl]amino]- (9CI) (CA INDEX NAME)



RN 252942-42-0 HCAPLUS
CN 1,2-Ethanediamine, N-[4-(2,4-dichlorophenyl)-5-(1H-pyrazol-1-yl)-2-pyrimidinyl]-N'-(5-nitro-2-pyridinyl)- (9CI) (CA INDEX NAME)

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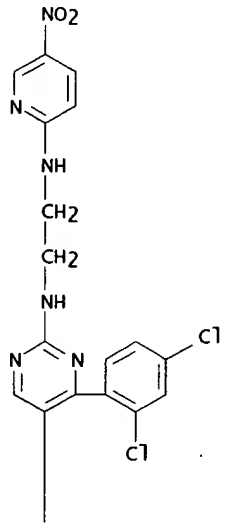

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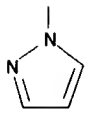

RN 252942-43-1 HCAPLUS
CN 1,2-Ethanediamine, N-[4-(2,4-dichlorophenyl)-5-(4-methyl-1H-imidazol-1-yl)-2-pyrimidinyl]-N'-(5-nitro-2-pyridinyl)- (9CI) (CA INDEX NAME)

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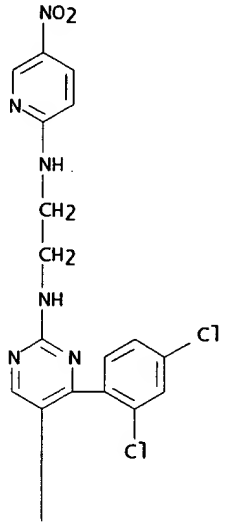

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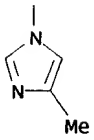

IT 252943-33-2P 252943-34-3P 252943-35-4P
252943-36-5P 252943-37-6P 252943-38-7P
252943-39-8P 252943-40-1P 252943-41-2P
252943-42-3P 252943-43-4P 252943-45-6P
252954-06-6P 252954-08-8P 252954-12-4P
252954-51-1P 252954-52-2P
RL: BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of aminopyrimidines and -pyridines as glycogen synthase kinase 3 inhibitors)
RN 252943-33-2 HCAPLUS
CN 1,2-Ethanediamine, N-[4-(2,4-dichlorophenyl)-5-(2,4-dimethyl-1H-imidazol-1-yl)-2-pyrimidinyl]-N'-(5-nitro-2-pyridinyl)- (9CI) (CA INDEX NAME)

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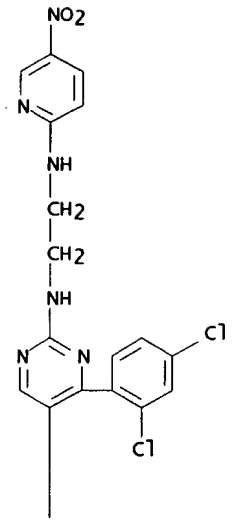

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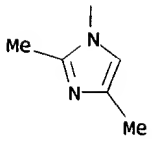

RN 252943-34-3 HCAPLUS
CN 2(1H)-Pyridinone, 1-[4-(2,4-dichlorophenyl)-2-[[2-[(5-nitro-2-pyridinyl)amino]ethyl]amino]-5-pyrimidinyl]- (9CI) (CA INDEX NAME)

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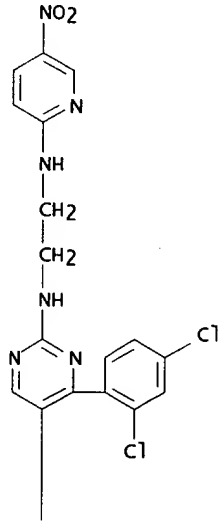

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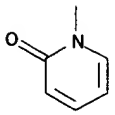
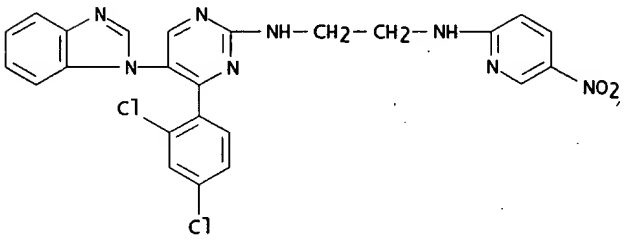
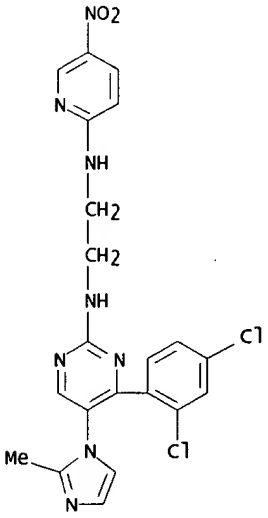


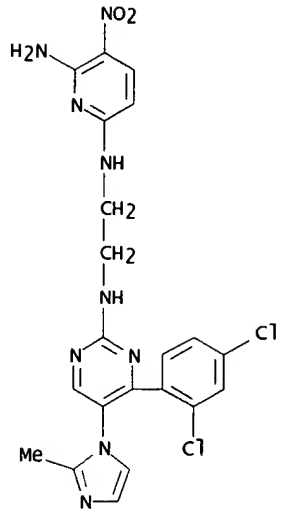
RN 252943-35-4 HCAPLUS
CN 1,2-Ethanediamine, N-[5-(1H-benzimidazol-1-yl)-4-(2,4-dichlorophenyl)-2-pyrimidinyl]-N'-(5-nitro-2-pyridinyl)- (9CI) (CA INDEX NAME)



RN 252943-36-5 HCAPLUS
CN 1,2-Ethanediamine, N-[4-(2,4-dichlorophenyl)-5-(2-methyl-1H-imidazol-1-yl)-2-pyrimidinyl]-N'-(5-nitro-2-pyridinyl)- (9CI) (CA INDEX NAME)



RN 252943-37-6 HCAPLUS
CN 2,6-Pyridinediamine, N6-[2-[[4-(2,4-dichlorophenyl)-5-(2-methyl-1H-imidazol-1-yl)-2-pyrimidinyl]amino]ethyl]-3-nitro- (9CI) (CA INDEX NAME)



RN 252943-38-7 HCAPLUS
CN 1,2-Ethanediamine, N-(6-amino-5-nitro-2-pyridinyl)-N'-[4-(2,4-dichlorophenyl)-5-(4-phenyl-1H-imidazol-1-yl)-2-pyrimidinyl]- (9CI) (CA INDEX NAME)

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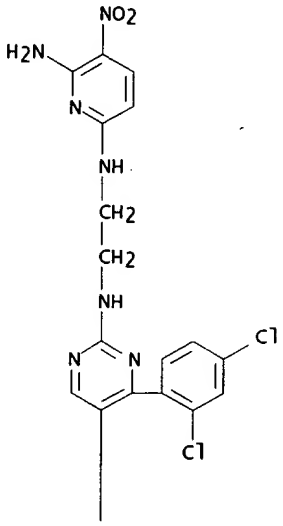

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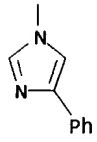

RN 252943-39-8 HCAPLUS
CN 2,6-Pyridinediamine, N6-[2-[[4-(2,4-dichlorophenyl)-5-(2,4-dimethyl-1H-

imidazol-1-yl)-2-pyrimidinyl]amino]ethyl]-3-nitro- (9CI) (CA INDEX NAME)

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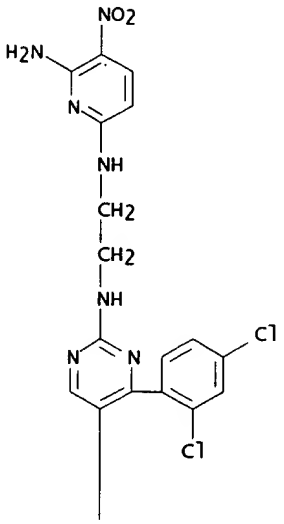

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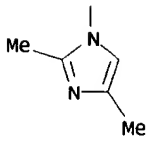
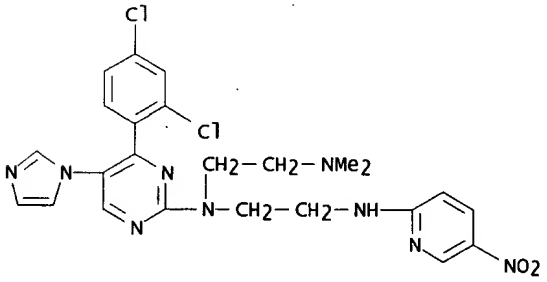
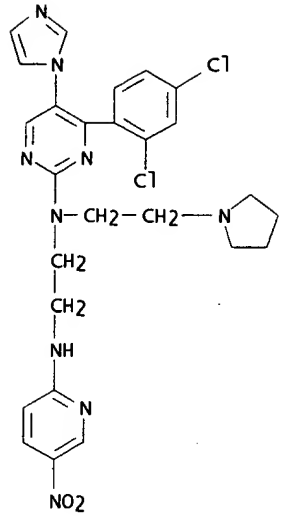


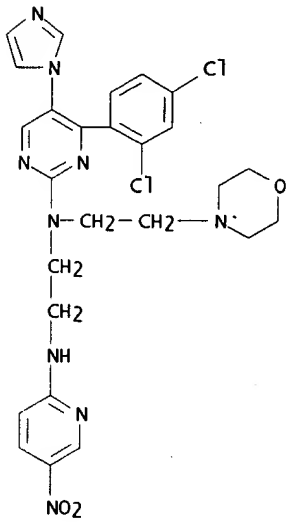
RN 252943-40-1 HCAPLUS
CN 1,2-Ethanediamine, N-[4-(2,4-dichlorophenyl)-5-(1H-imidazol-1-yl)-2-pyrimidinyl]-N',N'-dimethyl-N-[2-[(5-nitro-2-pyridinyl)amino]ethyl]- (9CI) (CA INDEX NAME)



RN 252943-41-2 HCAPLUS
CN 1,2-Ethanediamine, N-[4-(2,4-dichlorophenyl)-5-(1H-imidazol-1-yl)-2-pyrimidinyl]-N'-(5-nitro-2-pyridinyl)-N-[2-(1-pyrrolidinyl)ethyl]- (9CI) (CA INDEX NAME)



RN 252943-42-3 HCAPLUS
CN 1,2-Ethanediamine, N-[4-(2,4-dichlorophenyl)-5-(1H-imidazol-1-yl)-2-pyrimidinyl]-N-[2-(4-morpholinyl)ethyl]-N'-(5-nitro-2-pyridinyl)- (9CI) (CA INDEX NAME)



RN 252943-43-4 HCAPLUS
CN 3-Pyridinecarbonitrile, 6-[[2-[[5-(4-chloro-2-oxo-1(2H)-pyridinyl)-4-(2,4-dichlorophenyl)-2-pyrimidinyl]amino]ethyl]amino]- (9CI) (CA INDEX NAME)

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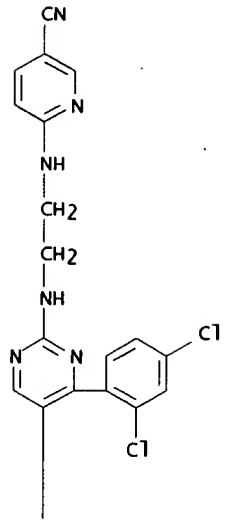

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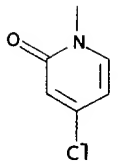
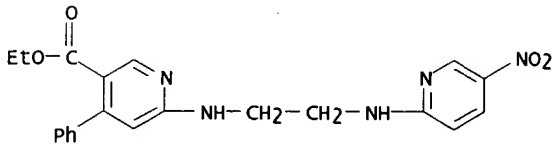
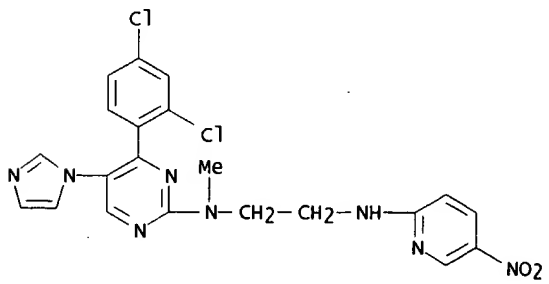


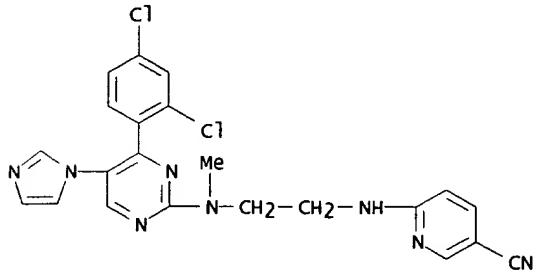
RN 252943-45-6 HCAPLUS
CN 3-Pyridinecarboxylic acid, 6-[[2-[(5-nitro-2-pyridinyl)amino]ethyl]amino]-4-phenyl-, ethyl ester (9CI) (CA INDEX NAME)



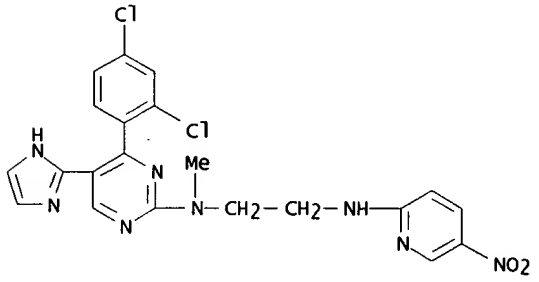
RN 252954-06-6 HCAPLUS
CN 1,2-Ethanediamine, N-[4-(2,4-dichlorophenyl)-5-(1H-imidazol-1-yl)-2-pyrimidinyl]-N-methyl-N'-(5-nitro-2-pyridinyl)- (9CI) (CA INDEX NAME)



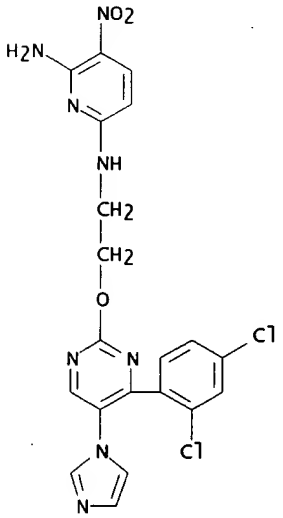
RN 252954-08-8 HCAPLUS
CN 3-Pyridinecarbonitrile, 6-[[2-[[4-(2,4-dichlorophenyl)-5-(1H-imidazol-1-yl)-2-pyrimidinyl]methylamino]ethyl]amino]- (9CI) (CA INDEX NAME)



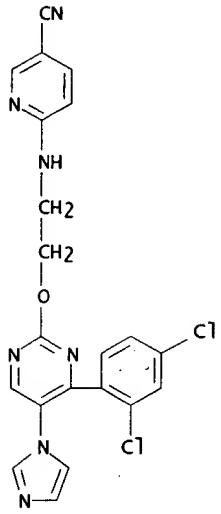
RN 252954-12-4 HCAPLUS
CN 1,2-Ethanediamine, N-[4-(2,4-dichlorophenyl)-5-(1H-imidazol-2-yl)-2-pyrimidinyl]-N-methyl-N'-(5-nitro-2-pyridinyl)- (9CI) (CA INDEX NAME)



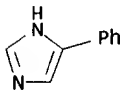
RN 252954-51-1 HCAPLUS
CN 2,6-Pyridinediamine, N6-[2-[[4-(2,4-dichlorophenyl)-5-(1H-imidazol-1-yl)-2-pyrimidinyl]oxy]ethyl]-3-nitro- (9CI) (CA INDEX NAME)



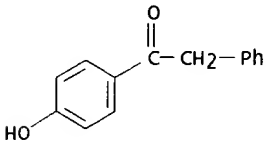
RN 252954-52-2 HCAPLUS
CN 3-Pyridinecarbonitrile, 6-[[2-[[4-(2,4-dichlorophenyl)-5-(1H-imidazol-1-yl)-2-pyrimidinyl]oxy]ethyl]amino]- (9CI) (CA INDEX NAME)



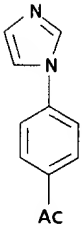
IT 670-95-1, 4-Phenylimidazole 2491-32-9 10041-06-2
35661-40-6 39910-98-0 55356-46-2
73895-36-0 208195-28-2 252955-08-1
252955-51-4
RL: RCT (Reactant)
(prepn. of aminopyrimidines and -pyridines as glycogen synthase kinase 3 inhibitors)
RN 670-95-1 HCAPLUS
CN 1H-Imidazole, 4-phenyl- (9CI) (CA INDEX NAME)



RN 2491-32-9 HCAPLUS
CN Ethanone, 1-(4-hydroxyphenyl)-2-phenyl- (9CI) (CA INDEX NAME)



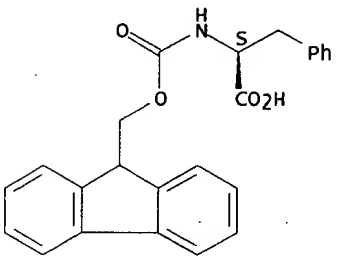
RN 10041-06-2 HCAPLUS
CN Ethanone, 1-[4-(1H-imidazol-1-yl)phenyl]- (9CI) (CA INDEX NAME)



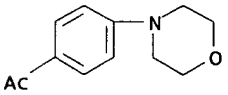
RN 35661-40-6 HCAPLUS
CN L-Phenylalanine, N-[(9H-fluoren-9-ylmethoxy)carbonyl]- (9CI) (CA INDEX

NAME)

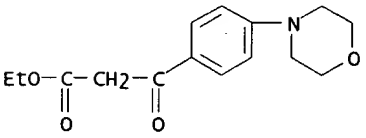
Absolute stereochemistry.



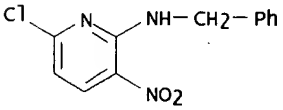
RN 39910-98-0 HCAPLUS
CN Ethanone, 1-[4-(4-morpholinyl)phenyl]- (9CI) (CA INDEX NAME)



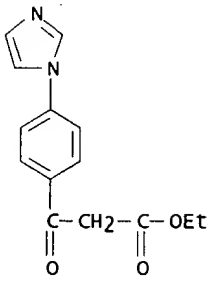
RN 55356-46-2 HCAPLUS
CN Benzenepropanoic acid, 4-(4-morpholinyl)-.beta.-oxo-, ethyl ester (9CI) (CA INDEX NAME)



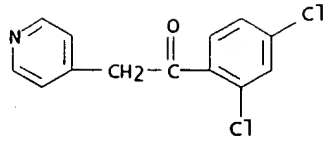
RN 73895-36-0 HCAPLUS
CN 2-Pyridinamine, 6-chloro-3-nitro-N-(phenylmethyl)- (9CI) (CA INDEX NAME)



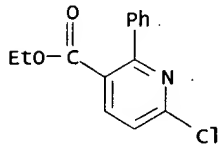
RN 208195-28-2 HCAPLUS
CN Benzenepropanoic acid, 4-(1H-imidazol-1-yl)-.beta.-oxo-, ethyl ester (9CI) (CA INDEX NAME)



RN 252955-08-1 HCAPLUS
CN Ethanone, 1-(2,4-dichlorophenyl)-2-(4-pyridinyl)- (9CI) (CA INDEX NAME)



RN 252955-51-4 HCAPLUS
CN 3-Pyridinecarboxylic acid, 6-chloro-2-phenyl-, ethyl ester (9CI) (CA INDEX NAME)



IT 35461-98-4P 46503-52-0P 57432-75-4P
65146-53-4P 80168-80-5P 82013-34-1P
108664-58-0P 108664-61-5P 115060-12-3P
120800-52-4P 137128-92-8P 138042-11-2P
163729-27-9P 179057-14-8P 250161-45-6P
252943-79-6P 252943-81-0P 252943-83-2P
252943-85-4P 252943-86-5P 252943-89-8P
252943-91-2P 252943-93-4P 252943-96-7P
252943-98-9P 252944-00-6P 252944-02-8P
252944-03-9P 252944-04-0P 252944-05-1P
252944-07-3P 252944-10-8P 252944-12-0P
252950-07-5P 252950-10-0P 252950-11-1P
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252954-00-0P 252954-02-2P 252954-04-4P
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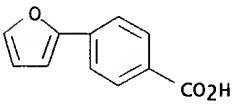
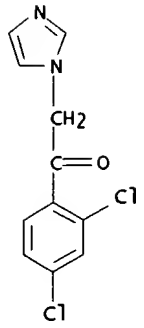
252954-53-3P 252954-54-4P 252954-56-6P
252954-57-7P 252954-58-8P 252954-59-9P
252954-61-3P 252954-62-4P 252954-63-5P
252954-64-6P 252954-65-7P 252954-66-8P
252954-67-9DP, resin-bound 252954-68-0DP, resin-bound
252954-71-5DP, resin-bound 252954-72-6DP, resin-bound
252954-73-7DP, resin-bound 252954-74-8DP, resin-bound
252954-75-9DP, resin-bound 252954-76-0DP, resin-bound
252954-79-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. of aminopyrimidines and -pyridines as glycogen synthase kinase 3 inhibitors)

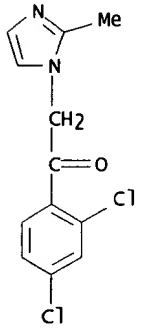
RN 35461-98-4 HCAPLUS
CN Benzoic acid, 4-(2-furanyl)- (9CI) (CA INDEX NAME)



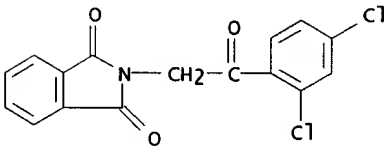
RN 46503-52-0 HCAPLUS
CN Ethanone, 1-(2,4-dichlorophenyl)-2-(1H-imidazol-1-yl)- (9CI) (CA INDEX NAME)



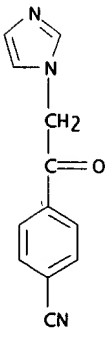
RN 57432-75-4 HCAPLUS
CN Ethanone, 1-(2,4-dichlorophenyl)-2-(2-methyl-1H-imidazol-1-yl)- (9CI) (CA INDEX NAME)



RN 65146-53-4 HCAPLUS
CN 1H-Isoindole-1,3(2H)-dione, 2-[2-(2,4-dichlorophenyl)-2-oxoethyl]- (9CI) (CA INDEX NAME)

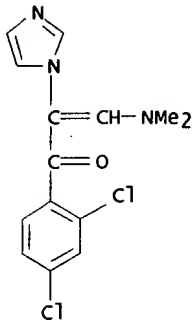


RN 80168-80-5 HCAPLUS
CN Benzonitrile, 4-(1H-imidazol-1-ylacetyl)- (9CI) (CA INDEX NAME)

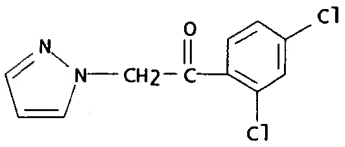


RN 82013-34-1 HCAPLUS

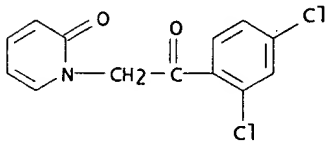
CN 2-Propen-1-one, 1-(2,4-dichlorophenyl)-3-(dimethylamino)-2-(1H-imidazol-1-yl)- (9CI) (CA INDEX NAME)



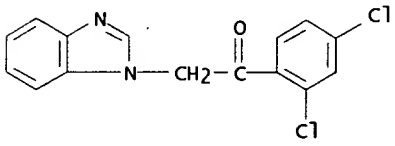
RN 108664-58-0 HCAPLUS
CN Ethanone, 1-(2,4-dichlorophenyl)-2-(1H-pyrazol-1-yl)- (9CI) (CA INDEX NAME)



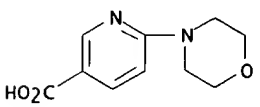
RN 108664-61-5 HCAPLUS
CN 2(1H)-Pyridinone, 1-[2-(2,4-dichlorophenyl)-2-oxoethyl]- (9CI) (CA INDEX NAME)



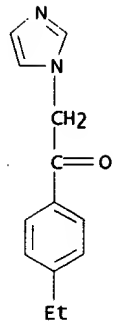
RN 115060-12-3 HCAPLUS
CN Ethanone, 2-(1H-benzimidazol-1-yl)-1-(2,4-dichlorophenyl)- (9CI) (CA INDEX NAME)



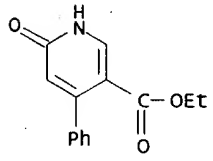
RN 120800-52-4 HCAPLUS
CN 3-Pyridinecarboxylic acid, 6-(4-morpholinyl)- (9CI) (CA INDEX NAME)



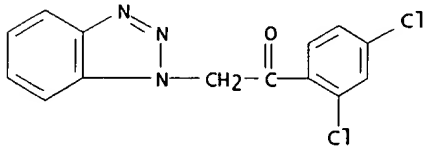
RN 137128-92-8 HCAPLUS
CN Ethanone, 1-(4-ethylphenyl)-2-(1H-imidazol-1-yl)- (9CI) (CA INDEX NAME)



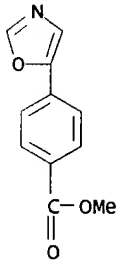
RN 138042-11-2 HCAPLUS
CN 3-Pyridinecarboxylic acid, 1,6-dihydro-6-oxo-4-phenyl-, ethyl ester (9CI) (CA INDEX NAME)



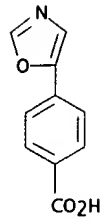
RN 163729-27-9 HCAPLUS
CN Ethanone, 2-(1H-benzotriazol-1-yl)-1-(2,4-dichlorophenyl)- (9CI) (CA INDEX NAME)



RN 179057-14-8 HCAPLUS
CN Benzoic acid, 4-(5-oxazolyl)-, methyl ester (9CI) (CA INDEX NAME)



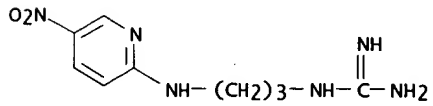
RN 250161-45-6 HCAPLUS
CN Benzoic acid, 4-(5-oxazolyl)- (9CI) (CA INDEX NAME)



RN 252943-79-6 HCAPLUS
CN Guanidine, [3-[(5-nitro-2-pyridinyl)amino]propyl]-, mono(4-methylbenzenesulfonate) (9CI) (CA INDEX NAME)

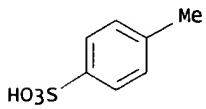
CM 1

CRN 252943-78-5
CMF C9 H14 N6 O2



CM 2

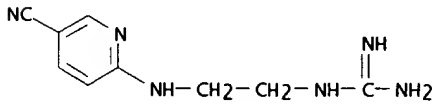
CRN 104-15-4
CMF C7 H8 O3 S



RN 252943-81-0 HCAPLUS
CN Guanidine, [2-[(5-cyano-2-pyridinyl)amino]ethyl]-, mono(4-methylbenzenesulfonate) (9CI) (CA INDEX NAME)

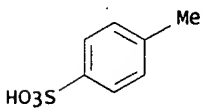
CM 1

CRN 252943-80-9
CMF C9 H12 N6



CM 2

CRN 104-15-4
CMF C7 H8 O3 S

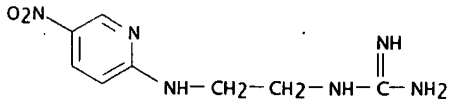


RN 252943-83-2 HCAPLUS

CN Guanidine, [2-[(5-nitro-2-pyridinyl)amino]ethyl]-, mono(4-methylbenzenesulfonate) (9CI) (CA INDEX NAME)

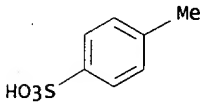
CM 1

CRN 252943-82-1
CMF C8 H12 N6 O2

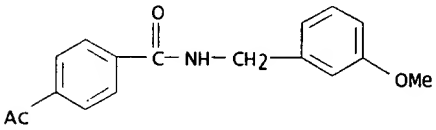


CM 2

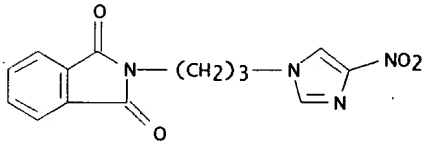
CRN 104-15-4
CMF C7 H8 O3 S



RN 252943-85-4 HCAPLUS
CN Benzamide, 4-acetyl-N-[(3-methoxyphenyl)methyl]- (9CI) (CA INDEX NAME)



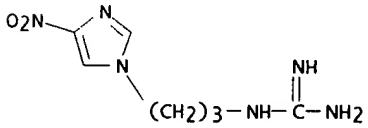
RN 252943-86-5 HCAPLUS
CN 1H-Isoindole-1,3(2H)-dione, 2-[3-(4-nitro-1H-imidazol-1-yl)propyl]- (9CI) (CA INDEX NAME)



RN 252943-89-8 HCAPLUS
CN Guanidine, [3-(4-nitro-1H-imidazol-1-yl)propyl]-, mono(4-methylbenzenesulfonate) (9CI) (CA INDEX NAME)

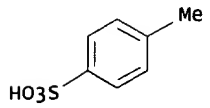
CM 1

CRN 252943-88-7
CMF C7 H12 N6 O2



CM 2

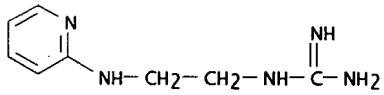
CRN 104-15-4
CMF C7 H8 O3 S



RN 252943-91-2 HCAPLUS
CN Guanidine, [2-(2-pyridinylamino)ethyl]-, mono(4-methylbenzenesulfonate) (9CI) (CA INDEX NAME)

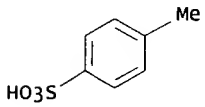
CM 1

CRN 252943-90-1
CMF C8 H13 N5



CM 2

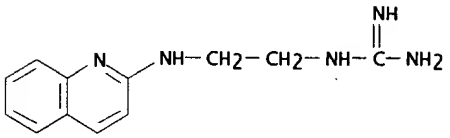
CRN 104-15-4
CMF C7 H8 O3 S



RN 252943-93-4 HCAPLUS
CN Guanidine, [2-(2-quinolinylamino)ethyl]-, mono(4-methylbenzenesulfonate) (9CI) (CA INDEX NAME)

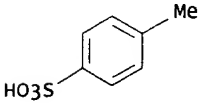
CM 1

CRN 252943-92-3
CMF C12 H15 N5



CM 2

CRN 104-15-4
CMF C7 H8 O3 S

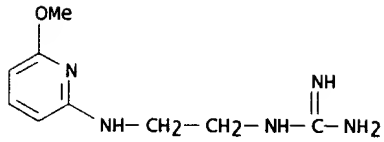


RN 252943-96-7 HCAPLUS
CN Guanidine, [2-[(6-methoxy-2-pyridinyl)amino]ethyl]-, mono(4-

methylbenzenesulfonate) (9CI) (CA INDEX NAME)

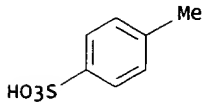
CM 1

CRN 252943-95-6
CMF C9 H15 N5 O



CM 2

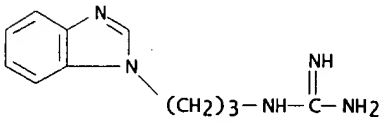
CRN 104-15-4
CMF C7 H8 O3 S



RN 252943-98-9 HCAPLUS
CN Guanidine, [3-(1H-benzimidazol-1-yl)propyl]-, mono(4-methylbenzenesulfonate) (9CI) (CA INDEX NAME)

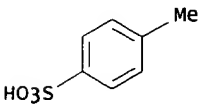
CM 1

CRN 252943-97-8
CMF C11 H15 N5



CM 2

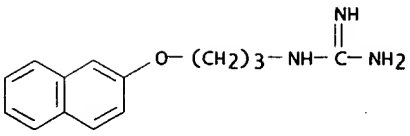
CRN 104-15-4
CMF C7 H8 O3 S



RN 252944-00-6 HCAPLUS
CN Guanidine, [3-(2-naphthalenyloxy)propyl]-, mono(4-methylbenzenesulfonate) (9CI) (CA INDEX NAME)

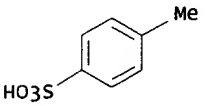
CM 1

CRN 252943-99-0
CMF C14 H17 N3 O

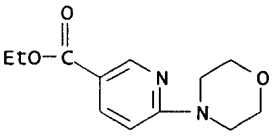


CM 2

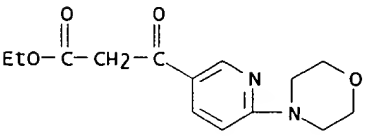
CRN 104-15-4
CMF C7 H8 O3 S



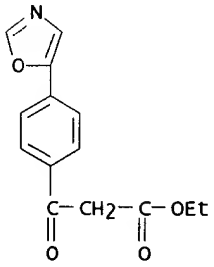
RN 252944-02-8 HCAPLUS
CN 3-Pyridinecarboxylic acid, 6-(4-morpholinyl)-, ethyl ester (9CI) (CA INDEX NAME)



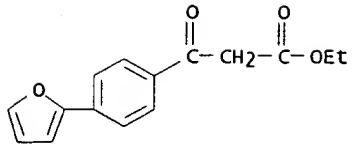
RN 252944-03-9 HCAPLUS
CN 3-Pyridinepropanoic acid, 6-(4-morpholinyl)-.beta.-oxo-, ethyl ester (9CI) (CA INDEX NAME)



RN 252944-04-0 HCAPLUS
CN Benzenepropanoic acid, 4-(5-oxazolyl)-.beta.-oxo-, ethyl ester (9CI) (CA INDEX NAME)



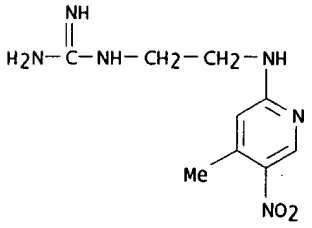
RN 252944-05-1 HCAPLUS
CN Benzenepropanoic acid, 4-(2-furanyl)-.beta.-oxo-, ethyl ester (9CI) (CA INDEX NAME)



RN 252944-07-3 HCAPLUS
CN Guanidine, [2-[(4-methyl-5-nitro-2-pyridinyl)amino]ethyl]-, mono(4-methylbenzenesulfonate) (9CI) (CA INDEX NAME)

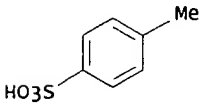
CM 1

CRN 252944-06-2
CMF C9 H14 N6 O2



CM 2

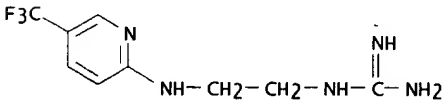
CRN 104-15-4
CMF C7 H8 O3 S



RN 252944-10-8 HCAPLUS
CN Guanidine, [2-[[5-(trifluoromethyl)-2-pyridinyl]amino]ethyl]-, mono(4-methylbenzenesulfonate) (9CI) (CA INDEX NAME)

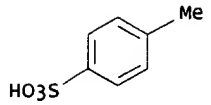
CM 1

CRN 252944-09-5
CMF C9 H12 F3 N5



CM 2

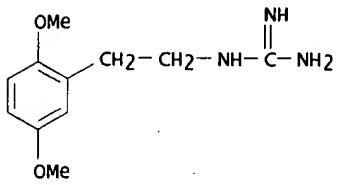
CRN 104-15-4
CMF C7 H8 O3 S



RN 252944-12-0 HCAPLUS
CN Guanidine, [2-(2,5-dimethoxyphenyl)ethyl]-, mono(4-methylbenzenesulfonate) (9CI) (CA INDEX NAME)

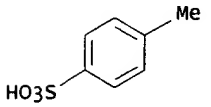
CM 1

CRN 252944-11-9
CMF C11 H17 N3 O2

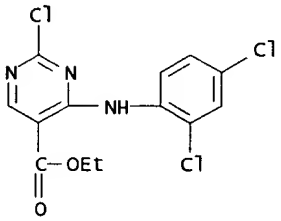


CM 2

CRN 104-15-4
CMF C7 H8 O3 S



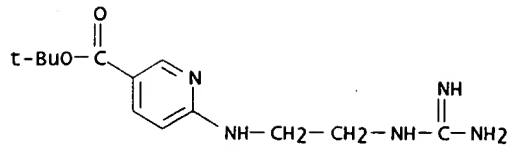
RN 252950-07-5 HCAPLUS
CN 5-Pyrimidinecarboxylic acid, 2-chloro-4-[(2,4-dichlorophenyl)amino]-, ethyl ester (9CI) (CA INDEX NAME)



RN 252950-10-0 HCAPLUS
CN 3-Pyridinecarboxylic acid, 6-[[2-[(aminoiminomethyl)amino]ethyl]amino]-, 1,1-dimethylethyl ester, mono(4-methylbenzenesulfonate) (9CI) (CA INDEX NAME)

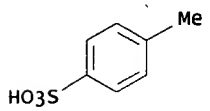
CM 1

CRN 252950-09-7
CMF C13 H21 N5 O2

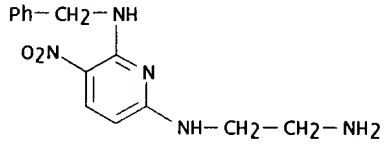


CM 2

CRN 104-15-4
CMF C7 H8 O3 S



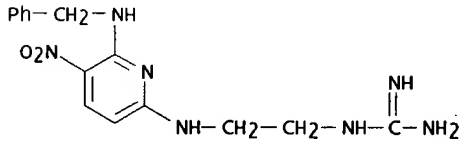
RN 252950-11-1 HCAPLUS
CN 2,6-Pyridinediamine, N6-(2-aminoethyl)-3-nitro-N2-(phenylmethyl)- (9CI) (CA INDEX NAME)



RN 252950-13-3 HCAPLUS
CN Guanidine, [2-[[5-nitro-6-[(phenylmethyl)amino]-2-pyridinyl]amino]ethyl]-, mono(4-methylbenzenesulfonate) (9CI) (CA INDEX NAME)

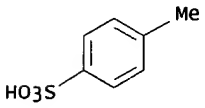
CM 1

CRN 252950-12-2
CMF C15 H19 N7 O2

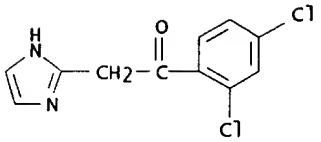


CM 2

CRN 104-15-4
CMF C7 H8 O3 S

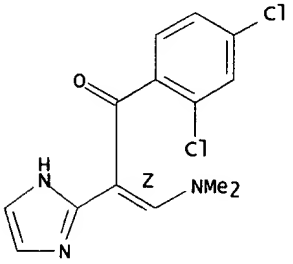


RN 252950-14-4 HCAPLUS
CN Ethanone, 1-(2,4-dichlorophenyl)-2-(1H-imidazol-2-yl)- (9CI) (CA INDEX NAME)



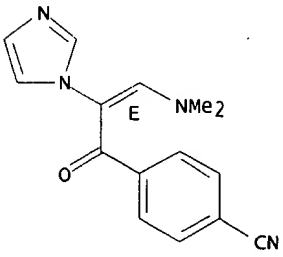
RN 252950-15-5 HCAPLUS
CN 2-Propen-1-one, 1-(2,4-dichlorophenyl)-3-(dimethylamino)-2-(1H-imidazol-2-yl)-, (2Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

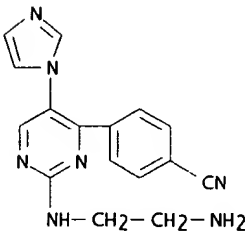


RN 252950-21-3 HCAPLUS
CN Benzonitrile, 4-[(2E)-3-(dimethylamino)-2-(1H-imidazol-1-yl)-1-oxo-2-propenyl]- (9CI) (CA INDEX NAME)

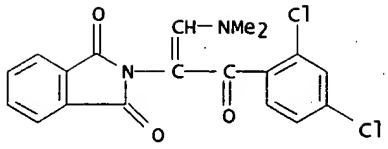
Double bond geometry as shown.



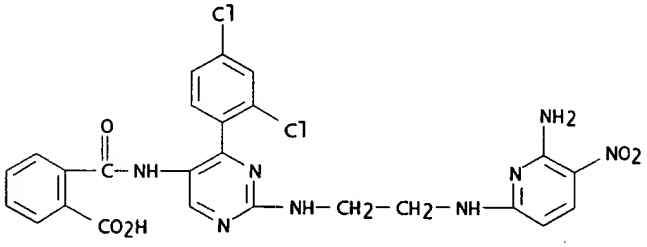
RN 252950-24-6 HCAPLUS
CN Benzonitrile, 4-[2-[(2-aminoethyl)amino]-5-(1H-imidazol-1-yl)-4-pyrimidinyl]- (9CI) (CA INDEX NAME)



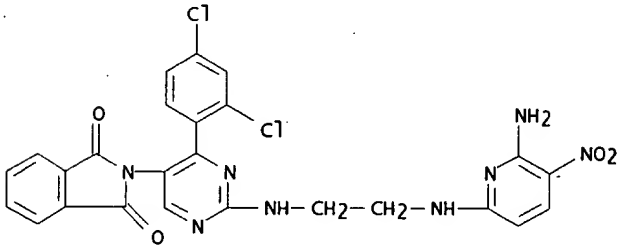
RN 252950-25-7 HCAPLUS
CN 1H-Isoindole-1,3(2H)-dione, 2-[1-(2,4-dichlorobenzoyl)-2-(dimethylamino)ethenyl]- (9CI) (CA INDEX NAME)



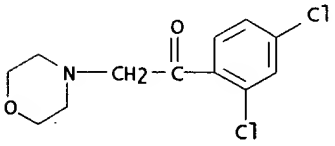
RN 252950-26-8 HCAPLUS
CN Benzoic acid, 2-[[[2-[[2-[(6-amino-5-nitro-2-pyridinyl)amino]ethyl]amino]-4-(2,4-dichlorophenyl)-5-pyrimidinyl]amino]carbonyl]- (9CI) (CA INDEX NAME)



RN 252950-27-9 HCAPLUS
CN 1H-Isoindole-1,3(2H)-dione, 2-[2-[[2-[(6-amino-5-nitro-2-pyridinyl)amino]ethyl]amino]-4-(2,4-dichlorophenyl)-5-pyrimidinyl]- (9CI) (CA INDEX NAME)

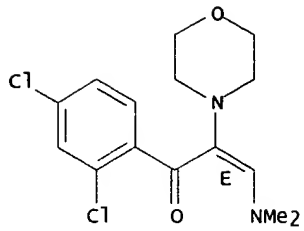


RN 252950-28-0 HCAPLUS
CN Ethanone, 1-(2,4-dichlorophenyl)-2-(4-morpholinyl)- (9CI) (CA INDEX NAME)

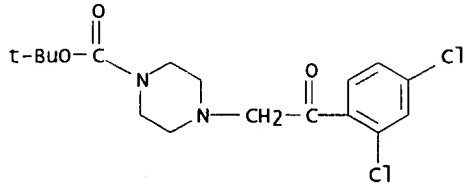


RN 252950-29-1 HCAPLUS
CN 2-Propen-1-one, 1-(2,4-dichlorophenyl)-3-(dimethylamino)-2-(4-morpholinyl)-, (2E)- (9CI) (CA INDEX NAME)

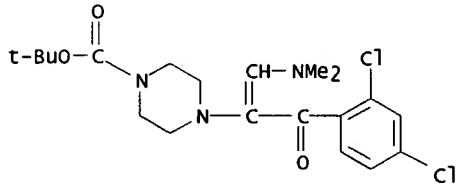
Double bond geometry as shown.



RN 252950-30-4 HCAPLUS
CN 1-Piperazinecarboxylic acid, 4-[2-(2,4-dichlorophenyl)-2-oxoethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



RN 252950-31-5 HCAPLUS
CN 1-Piperazinecarboxylic acid, 4-[1-(2,4-dichlorobenzoyl)-2-(dimethylamino)ethenyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



RN 252950-32-6 HCAPLUS
CN 1-Piperazinecarboxylic acid, 4-[2-[[2-[(6-amino-5-nitro-2-pyridinyl)amino]ethyl]amino]-4-(2,4-dichlorophenyl)-5-pyrimidinyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

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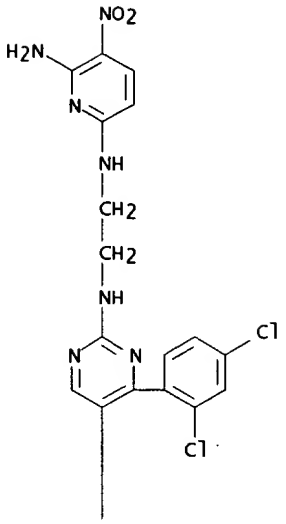

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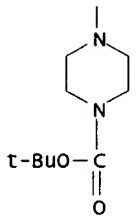
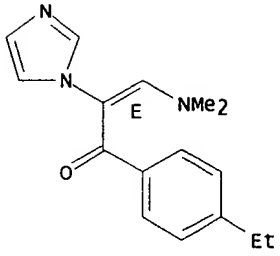
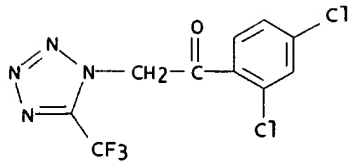


RN 252950-33-7 HCAPLUS
CN 2-Propen-1-one, 3-(dimethylamino)-1-(4-ethylphenyl)-2-(1H-imidazol-1-yl)-, (2E)- (9CI) (CA INDEX NAME)

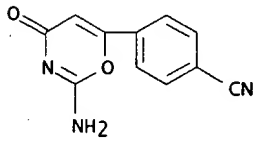
Double bond geometry as shown.



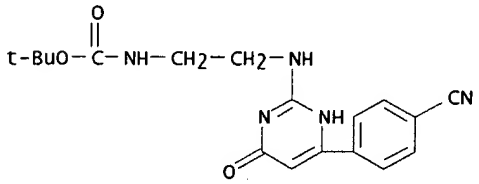
RN 252950-34-8 HCAPLUS
CN Ethanone, 1-(2,4-dichlorophenyl)-2-[5-(trifluoromethyl)-1H-tetrazol-1-yl]- (9CI) (CA INDEX NAME)



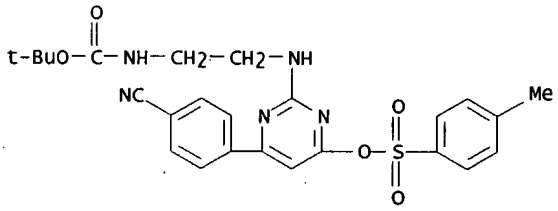
RN 252950-35-9 HCAPLUS
CN Benzonitrile, 4-(2-amino-4-oxo-4H-1,3-oxazin-6-yl)- (9CI) (CA INDEX NAME)



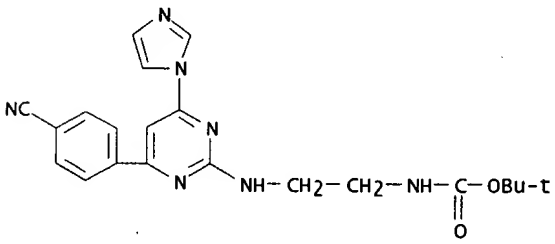
RN 252950-36-0 HCAPLUS
CN Carbamic acid, [2-[[6-(4-cyanophenyl)-1,4-dihydro-4-oxo-2-pyrimidinyl]amino]ethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



RN 252950-37-1 HCAPLUS
CN Carbamic acid, [2-[[4-(4-cyanophenyl)-6-[[(4-methylphenyl)sulfonyl]oxy]-2-pyrimidinyl]amino]ethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



RN 252950-38-2 HCAPLUS
CN Carbamic acid, [2-[[4-(4-cyanophenyl)-6-(1H-imidazol-1-yl)-2-pyrimidinyl]amino]ethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

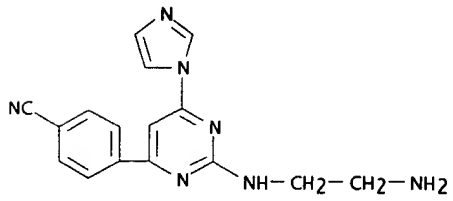


RN 252950-40-6 HCAPLUS

CN Benzonitrile, 4-[2-[(2-aminoethyl)amino]-6-(1H-imidazol-1-yl)-4-pyrimidinyl]-, bis(trifluoroacetate) (9CI) (CA INDEX NAME)

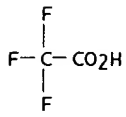
CM 1

CRN 252950-39-3
CMF C16 H15 N7

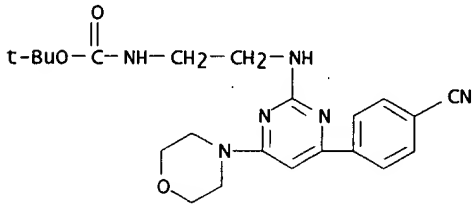


CM 2

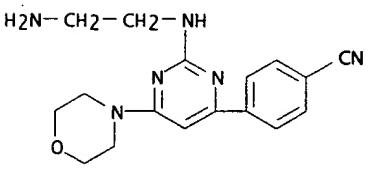
CRN 76-05-1
CMF C2 H F3 O2



RN 252950-41-7 HCAPLUS
CN Carbamic acid, [2-[[4-(4-cyanophenyl)-6-(4-morpholinyl)-2-pyrimidinyl]amino]ethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

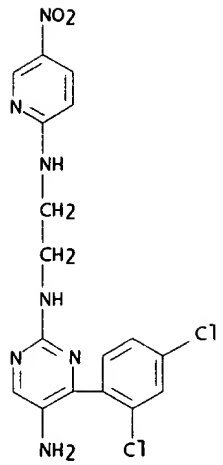


RN 252950-42-8 HCAPLUS
CN Benzonitrile, 4-[2-[(2-aminoethyl)amino]-6-(4-morpholinyl)-4-pyrimidinyl]-, dihydrochloride (9CI) (CA INDEX NAME)

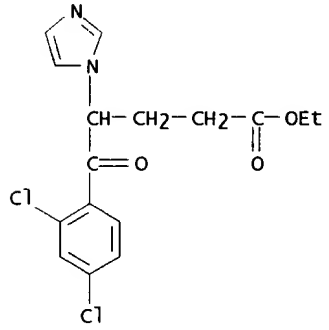


●2 HCl

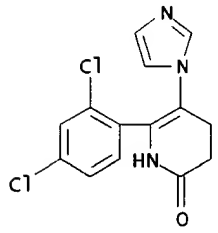
RN 252953-77-8 HCAPLUS
CN 2,5-Pyrimidinediamine, 4-(2,4-dichlorophenyl)-N2-[2-[(5-nitro-2-pyridinyl)amino]ethyl]- (9CI) (CA INDEX NAME)



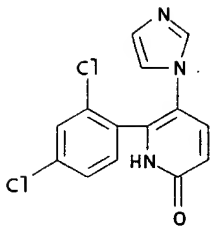
RN 252953-79-0 HCAPLUS
CN 1H-Imidazole-1-butanoic acid, .gamma.-(2,4-dichlorobenzoyl)-, ethyl ester (9CI) (CA INDEX NAME)



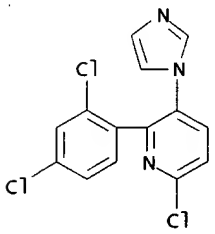
RN 252953-81-4 HCAPLUS
CN 2(1H)-Pyridinone, 6-(2,4-dichlorophenyl)-3,4-dihydro-5-(1H-imidazol-1-yl)- (9CI) (CA INDEX NAME)



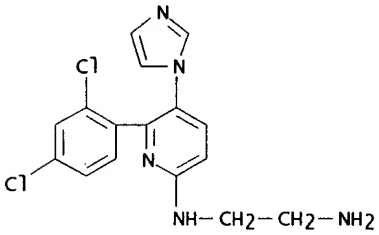
RN 252953-82-5 HCAPLUS
CN 2(1H)-Pyridinone, 6-(2,4-dichlorophenyl)-5-(1H-imidazol-1-yl)- (9CI) (CA INDEX NAME)



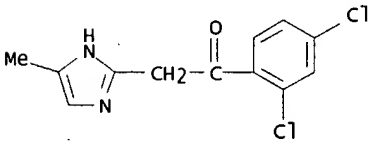
RN 252953-83-6 HCAPLUS
CN Pyridine, 6-chloro-2-(2,4-dichlorophenyl)-3-(1H-imidazol-1-yl)- (9CI) (CA INDEX NAME)



RN 252953-84-7 HCAPLUS
CN 1,2-Ethanediamine, N-[6-(2,4-dichlorophenyl)-5-(1H-imidazol-1-yl)-2-pyridinyl]- (9CI) (CA INDEX NAME)

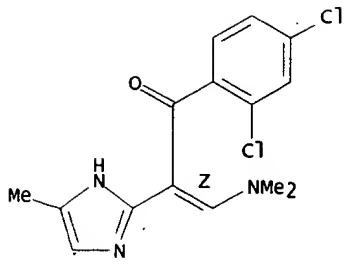


RN 252953-85-8 HCAPLUS
CN Ethanone, 1-(2,4-dichlorophenyl)-2-(4-methyl-1H-imidazol-2-yl)- (9CI) (CA INDEX NAME)

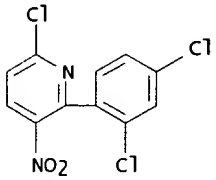


RN 252953-86-9 HCAPLUS
CN 2-Propen-1-one, 1-(2,4-dichlorophenyl)-3-(dimethylamino)-2-(4-methyl-1H-imidazol-2-yl)-, (2Z)- (9CI) (CA INDEX NAME)

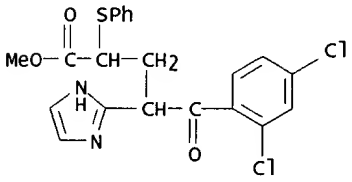
Double bond geometry as shown.



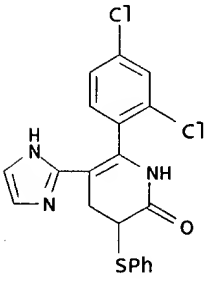
RN 252953-92-7 HCAPLUS
CN Pyridine, 6-chloro-2-(2,4-dichlorophenyl)-3-nitro- (9CI) (CA INDEX NAME)



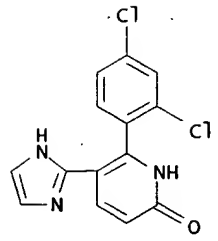
RN 252953-94-9 HCAPLUS
CN Benzenepentanoic acid, 2,4-dichloro-.gamma.-(1H-imidazol-2-yl)-.delta.-oxo-.alpha.-(phenylthio)-, methyl ester (9CI) (CA INDEX NAME)



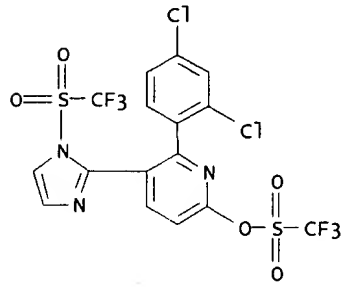
RN 252953-95-0 HCAPLUS
CN 2(1H)-Pyridinone, 6-(2,4-dichlorophenyl)-3,4-dihydro-5-(1H-imidazol-2-yl)-3-(phenylthio)- (9CI) (CA INDEX NAME)



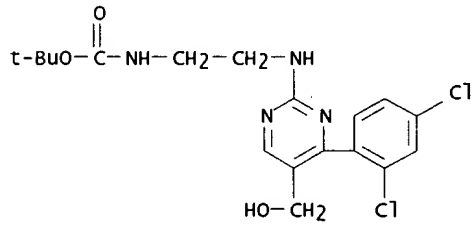
RN 252953-96-1 HCAPLUS
CN 2(1H)-Pyridinone, 6-(2,4-dichlorophenyl)-5-(1H-imidazol-2-yl)- (9CI) (CA INDEX NAME)



RN 252953-97-2 HCAPLUS
CN Methanesulfonic acid, trifluoro-, 6-(2,4-dichlorophenyl)-5-[1-[(trifluoromethyl)sulfonyl]-1H-imidazol-2-yl]-2-pyridinyl ester (9CI) (CA INDEX NAME)



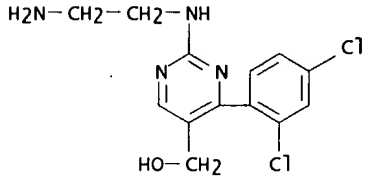
RN 252953-98-3 HCAPLUS
CN Carbamic acid, [2-[[4-(2,4-dichlorophenyl)-5-(hydroxymethyl)-2-pyrimidinyl]amino]ethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



RN 252954-00-0 HCAPLUS
CN 5-Pyrimidinemethanol, 2-[(2-aminoethyl)amino]-4-(2,4-dichlorophenyl)-, mono(trifluoroacetate) (salt) (9CI) (CA INDEX NAME)

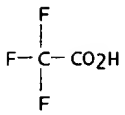
CM 1

CRN 252953-99-4
CMF C13 H14 Cl2 N4 O

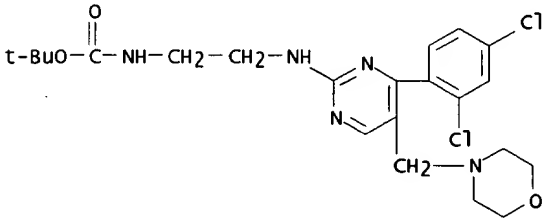


CM 2

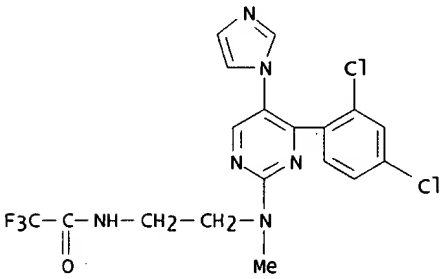
CRN 76-05-1
CMF C2 H F3 O2



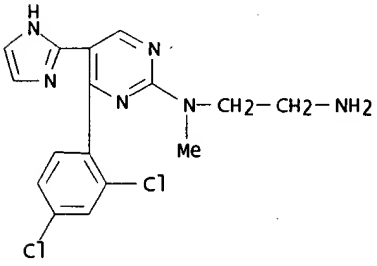
RN 252954-02-2 HCAPLUS
CN Carbamic acid, [2-[[4-(2,4-dichlorophenyl)-5-(4-morpholinylmethyl)-2-pyrimidinyl]amino]ethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



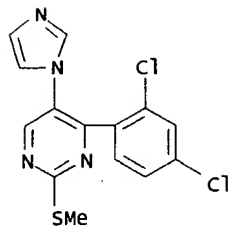
RN 252954-04-4 HCAPLUS
CN Acetamide, N-[2-[[4-(2,4-dichlorophenyl)-5-(1H-imidazol-1-yl)-2-pyrimidinyl]methylamino]ethyl]-2,2,2-trifluoro- (9CI) (CA INDEX NAME)



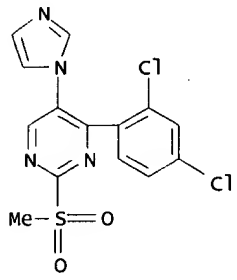
RN 252954-10-2 HCAPLUS
CN 1,2-Ethanediamine, N-[4-(2,4-dichlorophenyl)-5-(1H-imidazol-2-yl)-2-pyrimidinyl]-N-methyl- (9CI) (CA INDEX NAME)



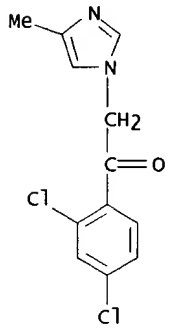
RN 252954-15-7 HCAPLUS
CN Pyrimidine, 4-(2,4-dichlorophenyl)-5-(1H-imidazol-1-yl)-2-(methylthio)- (9CI) (CA INDEX NAME)



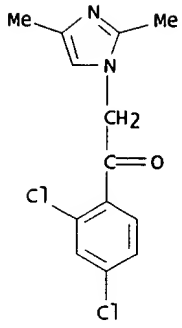
RN 252954-48-6 HCAPLUS
CN Pyrimidine, 4-(2,4-dichlorophenyl)-5-(1H-imidazol-1-yl)-2-(methylsulfonyl)- (9CI) (CA INDEX NAME)



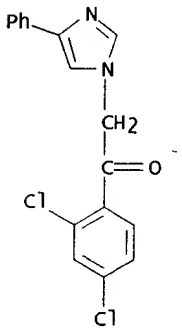
RN 252954-53-3 HCAPLUS
CN Ethanone, 1-(2,4-dichlorophenyl)-2-(4-methyl-1H-imidazol-1-yl)- (9CI) (CA INDEX NAME)



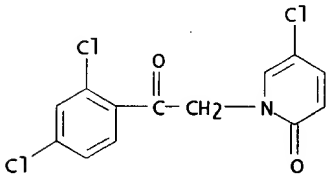
RN 252954-54-4 HCAPLUS
CN Ethanone, 1-(2,4-dichlorophenyl)-2-(2,4-dimethyl-1H-imidazol-1-yl)- (9CI) (CA INDEX NAME)



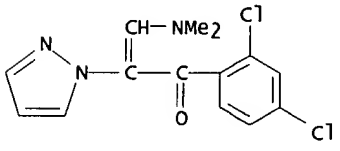
RN 252954-56-6 HCAPLUS
CN Ethanone, 1-(2,4-dichlorophenyl)-2-(4-phenyl-1H-imidazol-1-yl)- (9CI) (CA INDEX NAME)



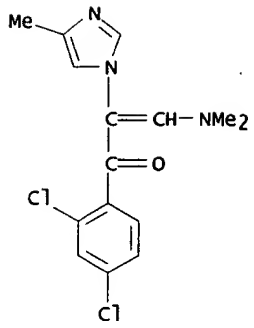
RN 252954-57-7 HCAPLUS
CN 2(1H)-Pyridinone, 5-chloro-1-[2-(2,4-dichlorophenyl)-2-oxoethyl]- (9CI) (CA INDEX NAME)



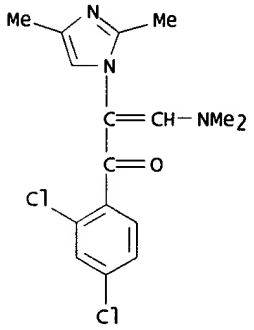
RN 252954-58-8 HCAPLUS
CN 2-Propen-1-one, 1-(2,4-dichlorophenyl)-3-(dimethylamino)-2-(1H-pyrazol-1-yl)- (9CI) (CA INDEX NAME)



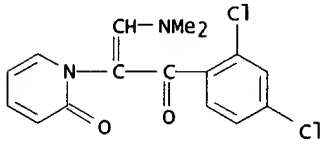
RN 252954-59-9 HCAPLUS
CN 2-Propen-1-one, 1-(2,4-dichlorophenyl)-3-(dimethylamino)-2-(4-methyl-1H-imidazol-1-yl)- (9CI) (CA INDEX NAME)



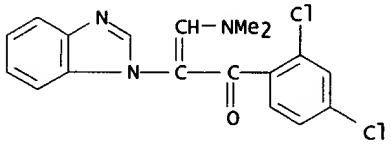
RN 252954-61-3 HCAPLUS
CN 2-Propen-1-one, 1-(2,4-dichlorophenyl)-3-(dimethylamino)-2-(2,4-dimethyl-1H-imidazol-1-yl)- (9CI) (CA INDEX NAME)



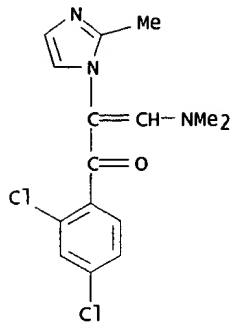
RN 252954-62-4 HCAPLUS
CN 2(1H)-Pyridinone, 1-[1-(2,4-dichlorobenzoyl)-2-(dimethylamino)ethenyl]- (9CI) (CA INDEX NAME)



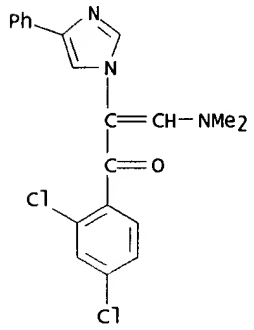
RN 252954-63-5 HCAPLUS
CN 2-Propen-1-one, 2-(1H-benzimidazol-1-yl)-1-(2,4-dichlorophenyl)-3-(dimethylamino)- (9CI) (CA INDEX NAME)



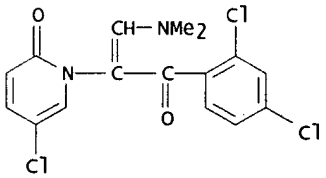
RN 252954-64-6 HCAPLUS
CN 2-Propen-1-one, 1-(2,4-dichlorophenyl)-3-(dimethylamino)-2-(2-methyl-1H-imidazol-1-yl)- (9CI) (CA INDEX NAME)



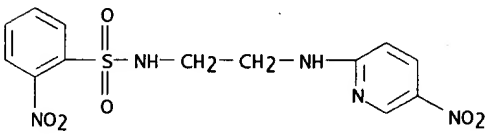
RN 252954-65-7 HCAPLUS
CN 2-Propen-1-one, 1-(2,4-dichlorophenyl)-3-(dimethylamino)-2-(4-phenyl-1H-imidazol-1-yl)- (9CI) (CA INDEX NAME)



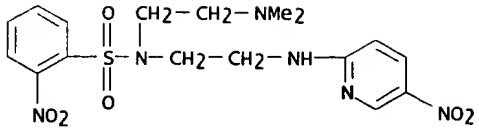
RN 252954-66-8 HCAPLUS
CN 2(1H)-Pyridinone, 5-chloro-1-[1-(2,4-dichlorobenzoyl)-2-(dimethylamino)ethenyl]- (9CI) (CA INDEX NAME)



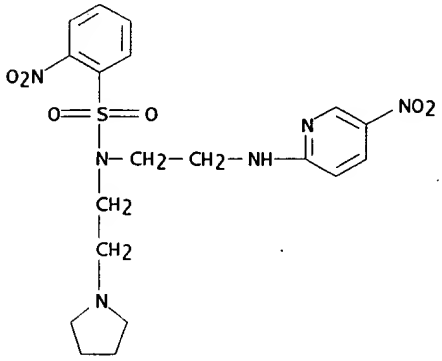
RN 252954-67-9 HCAPLUS
CN Benzenesulfonamide, 2-nitro-N-[2-[(5-nitro-2-pyridinyl)amino]ethyl]- (9CI) (CA INDEX NAME)



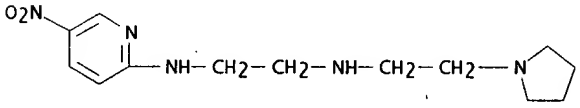
RN 252954-68-0 HCAPLUS
CN Benzenesulfonamide, N-[2-(dimethylamino)ethyl]-2-nitro-N-[2-[(5-nitro-2-pyridinyl)amino]ethyl]- (9CI) (CA INDEX NAME)



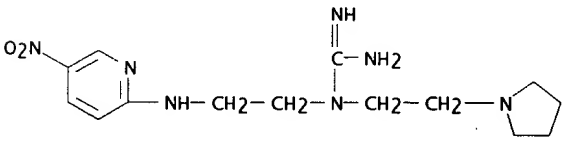
RN 252954-71-5 HCAPLUS
CN Benzenesulfonamide, 2-nitro-N-[2-[(5-nitro-2-pyridinyl)amino]ethyl]-N-[2-(1-pyrrolidinyl)ethyl]- (9CI) (CA INDEX NAME)



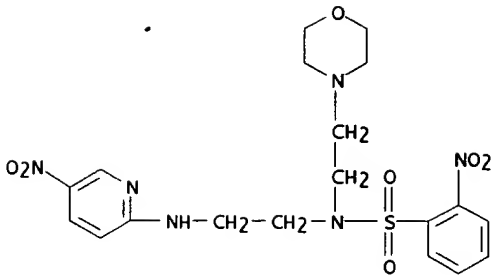
RN 252954-72-6 HCAPLUS
CN 1,2-Ethanediamine, N-(5-nitro-2-pyridinyl)-N'-[2-(1-pyrrolidinyl)ethyl]- (9CI) (CA INDEX NAME)



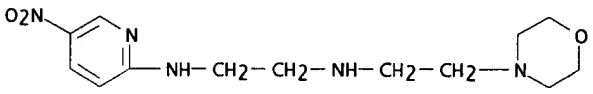
RN 252954-73-7 HCAPLUS
CN Guanidine, N-[2-[(5-nitro-2-pyridinyl)amino]ethyl]-N-[2-(1-pyrrolidinyl)ethyl]- (9CI) (CA INDEX NAME)



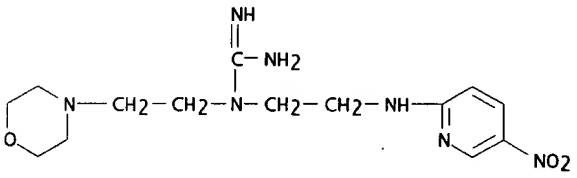
RN 252954-74-8 HCAPLUS
CN Benzenesulfonamide, N-[2-(4-morpholinyl)ethyl]-2-nitro-N-[2-[(5-nitro-2-pyridinyl)amino]ethyl]- (9CI) (CA INDEX NAME)



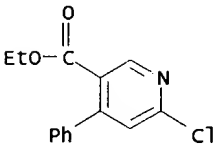
RN 252954-75-9 HCAPLUS
CN 1,2-Ethanediamine, N-[2-(4-morpholinyl)ethyl]-N'-(5-nitro-2-pyridinyl)-(9CI) (CA INDEX NAME)



RN 252954-76-0 HCAPLUS
CN Guanidine, N-[2-(4-morpholinyl)ethyl]-N-[2-[(5-nitro-2-pyridinyl)amino]ethyl]- (9CI) (CA INDEX NAME)



RN 252954-79-3 HCAPLUS
CN 3-Pyridinecarboxylic acid, 6-chloro-4-phenyl-, ethyl ester (9CI) (CA INDEX NAME)



RE.CNT 5
RE
(1) Chiron Corp; WO 9816528 A 1998 HCAPLUS
(2) Connor, S; Journal of Pharmacy and Pharmacology 1997, V49(3), P336 HCAPLUS
(3) Hoffman, W; US 5741796 A 1998 HCAPLUS
(4) Mantlo, N; WO 9824782 A 1998 HCAPLUS
(5) Takeda Chemical Industries Ltd; EP 0710659 A 1996 HCAPLUS

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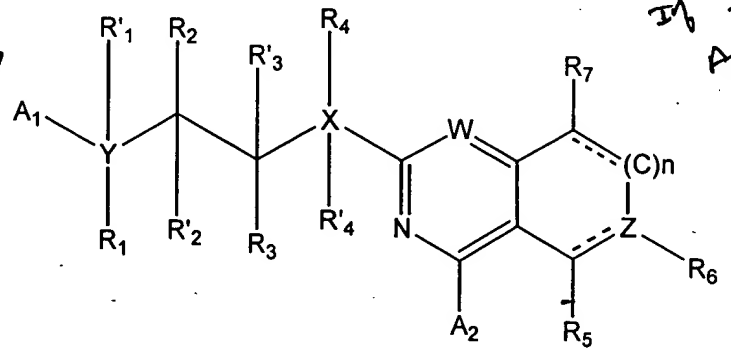
The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

That which is claimed is:

1. A compound having the structure:



wherein:

W and Z are optionally substituted carbon, nitrogen or sulfur;

X and Y are independently selected from the group consisting of nitrogen, oxygen, and optionally substituted carbon;

n is 0, 1 or 2;

A_1 and A_2 are optionally substituted aryl, aryloxy, arylamino or heteroaryl;

R_1, R_2, R_3 and R_4 are independently selected from the group consisting of hydrogen, hydroxyl, and optionally substituted loweralkyl, cycloloweralkyl, alkylaminoalkyl, loweralkoxy, amino, alkylamino, alkylcarbonyl, arylcarbonyl, aralkylcarbonyl, heteroarylcarbonyl, heteroaralkylcarbonyl, aryl and heteroaryl;

R'_1, R'_2, R'_3 and R'_4 are independently selected from the group consisting of hydrogen, and optionally substituted loweralkyl;

R_5, R_6 R_7 and are independently selected from the group consisting of hydrogen, hydroxy, halo, carboxyl, nitro, amino, amido, amidino, imido, cyano, and substituted or unsubstituted loweralkyl, loweralkoxy, alkylcarbonyl, arylcarbonyl, aralkylcarbonyl, heteroarylcarbonyl, heteraralkylcarbonyl, alkylcarbonyloxy, arylcarbonyloxy, aralkylcarbonyloxy, alkylaminocarbonyloxy, arylaminocarbonyloxy, formyl, loweralkylcarbonyl, loweralkoxycarbonyl, aminocarbonyl, aminoaryl, alkylsulfonyl, sulfonamido, aminoalkoxy, alkylamino, arylamino, aralkylamino, heteroarylamino, heteroaralkylamino, alkylcarbonylamino, alkylaminocarbonylamino, arylaminocarbonylamino, aralkylcarbonylamino, heteroaralkylcarbonylamino, arylcarbonylamino, heteroarylcarbonylamino, amidino, cycloalkyl, cycloamido, cyclothioamido, cycloamidino, heterocycloamidino,

cycloimido, heterocycloimido, guanidinyl, aryl, biaryl, heteroaryl, heterobiaryl, heterocyclo, heterocycloalkyl, arylsulfonyl and arylsulfonamido;

and the pharmaceutically acceptable salts thereof.

2. A compound of claim 1 wherein at least one of X and Y is nitrogen.

3. A compound of claim 2 wherein one of X and Y is nitrogen and the other of X and Y is optionally substituted carbon.

4. A compound of claim 2 wherein one of X and Y is nitrogen and the other of X and Y is oxygen.

5. A compound of claim 2, wherein both X and Y are nitrogen.

6. A compound of claim 1, wherein at least one of A_1 and A_2 is an aromatic ring having from 3 to 10 carbon ring atoms and optionally 1 or more ring heteroatoms.

7. A compound of claim 6, wherein at least one of A_1 and A_2 is optionally substituted carbocyclic aryl, arylamino or aryloxy.

8. A compound of claim 6, wherein at least one of A_1 and A_2 is optionally substituted heteroaryl.

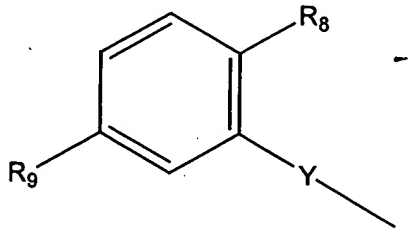
9. A compound of claim 6, wherein at least one of A_1 and A_2 is selected from the group consisting of substituted or unsubstituted phenylamino and phenyloxy.

10. A compound of claim 6, wherein at least one of A_1 and A_2 is selected from the group consisting of substituted or unsubstituted pyridyl, pyrimidinyl, thiazolyl, indolyl, imidazolyl, oxadiazolyl, tetrazolyl, pyrazinyl, triazolyl, thiophenyl, furanyl, quinolinyl, purinyl, naphthyl, benzothiazolyl, benzopyridyl, and benzimidazolyl.

11. A compound of claim 6, wherein at least one of A_1 and A_2 is substituted with at least one and not more than 3 substitution groups.

12. A compound of claim 11, wherein said substitution groups are independently selected from the group consisting of nitro, amino, cyano, halo, thioamido, amidino, oxamidino, alkoxyamidino, imidino, guanidino, sulfonamido, carboxyl, formyl, loweralkyl, halologweralkyl, loweralkoxy, halologweralkoxy, loweralkoxyalkyl, loweralkylaminologweralkoxy, loweralkylcarbonyl, loweraralkylcarbonyl, lowerheteroaralkylcarbonyl, alkylthio, aminoalkyl and cyanoalkyl.

13. A compound of claim 6 wherein at least one of A_1 and A_2 has the formula:



(II)

wherein Y is -NH or -O-; and

R_8 and R_9 are independently selected from the group consisting of hydrogen, nitro, amino, cyano, halo, thioamido, amidino, oxamidino, alkoxyamidino, imidino, guanidinyl, sulfonamido, carboxyl, formyl, loweralkyl, halologweralkyl, loweralkoxy, halologweralkoxy, loweralkoxyalkyl,loweralkylaminologweralkoxy, loweralkylcarbonyl, loweraralkylcarbonyl, lowerheteroaralkylcarbonyl, alkylthio, aryl and, aralkyl.

14. A compound of claim 13, wherein A_1 and A_2 are selected from the group consisting of halo and halologweralkyl.

15. A compound of claim 14, wherein A_1 and A_2 are halo.

16. A compound of claim 13, wherein at least one of A_1 and A_2 is selected from the group consisting of 2,5-dichlorophenylamino and 2,5-dichlorophenyloxy.

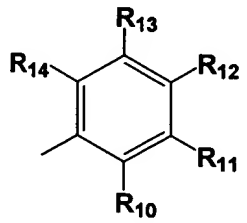
17. A compound of claim 1, wherein at least one of R_1, R_2, R_3 and R_4 is substituted loweralkyl selected from the group consisting of hydrogen, unsubstituted or substituted loweralkyl, halologweralkyl, heterocycloaminoalkyl, and loweralkylaminologweralkyl.

18. A compound of claim17, wherein at least one of R_1, R_2, R_3 and R_4 is loweralkylaminoloweralkyl.

19. A compound of claim17, wherein R_1, R_2, and R_3 are hydrogen and R_4 is selected from the group consisting of hydrogen, methyl, ethyl, aminoethyl, dimethylaminoethyl, pyridylethyl, piperidinyl, pyrrolidinylethyl, piperazinylethyl and morpholinylethyl.

20. A compound of claim 1, wherein at least one of R_5 and R_7 is selected from the group consisting of substituted and unsubstituted aryl, heteroaryl and biaryl.

21. A compound of claim 20 wherein at least one of R_5 and R_7 is a substituted or unsubstituted moiety of the formula:



(III)

wherein R_{10}, R_{11}, R_{12}, R_{13}, and R_{14} are independently selected from the group consisting of hydrogen, nitro, amino, cyano, halo, thioamido, carboxyl, hydroxy, and optionally substituted loweralkyl, loweralkoxy, loweralkoxyalkyl, halologweralkyl, halologweralkoxy, aminoalkyl, alkylamino, alkylthio, alkylcarbonylamino, aralkyl-carbonylamino, heteroaralkylcarbonylamino, arylcarbonylamino, heteroarylcarbonylamino aminocarbonyl, loweralkylaminocarbonyl, aminoaralkyl, , loweralkylaminoalkyl, aryl, heteroaryl, cycloheteroalkyl, aralkyl, alkylcarbonyloxy, arylcarbonyloxy, aralkylcarbonyloxy, arylcarbonyloxyalkyl, alkylcarbonyloxyalkyl, heteroarylcarbonyloxyalkyl, aralkycarbonyloxyalkyl, and heteroaralkcarbonyl-oxyalkyl.

22. A compound of claim 21 wherein R_{10}, R_{11}, R_{13}, and R_{14} are hydrogen and R_{12} is selected from the group consisting of halo, loweralkyl, hydroxy, loweralkoxy, halologweralkyl, aminocarbonyl, alkylaminocarbonyl and cyano.

23. A compound of claim 21 wherein R_{11}, R_{13}, and R_{14} are hydrogen and R_{10} and R_{12} are independently selected from the group consisting of halo, loweralkyl, hydroxy, loweralkoxy, halologweralkyl and cyano.

24. A compound of claim 21 wherein R_{10}, R_{11}, R_{13}, and R_{14} are hydrogen and R_{12} is heteroaryl.

25. A compound of claim 21 wherein R_{10}, R_{11}, R_{13}, and R_{14} are hydrogen and R_{12} is a heterocycloalkyl.

26. A compound of claim 21 wherein at least one of R_{10}, R_{11}, R_{12}, R_{13}, and R_{14} are halo and the remainder of R_{10}, R_{11}, R_{12}, R_{13}, and R_{14} are hydrogen.

27. A compound of claim 21 wherein at least one of R_5 and R_7 is selected from the group consisting of dichlorophenyl, difluorophenyl, trifluoromethylphenyl, chlorofluorophenyl, bromochlorophenyl, ethylphenyl, methylchlorophenyl, imidazolylphenyl, cyanophenyl, morphlinophenyl and cyanochlorophenyl.

28. A compound of claim 1, wherein R_6 is substituted alkyl selected from the group consisting of aralkyl, hydroxyalkyl, aminoalkyl, aminoaralkyl, carbonylaminoalkyl, alkylcarbonylaminoalkyl, arylcarbonylaminoalkyl, aralkylcarbonylaminoalkyl, aminoalkoxyalkyl and arylaminoalkyl.

29. A compound of claim 1, wherein R_6 is substituted amino selected from the group consisting of alkylamino, alkylcarbonylamino, alkoxycarbonylamino, arylalkylamino, arylcarbonylamino, alkylthiocarbonylamino, arylsulfonylamino, heteroarylamino alkylcarbonylamino, arylcarbonylamino, heteroarylcarbonylamino, aralkylcarbonylamino, and heteroaralkylcarbonylamino.

30. A compound of claim 1, wherein R_6 is selected from the group consisting of unsubstituted or substituted aminocarbonyl, alkyloxycarbonyl, aryloxycarbonyl, aralkyloxycarbonyl and alkylaminoalkyloxycarbonyl.

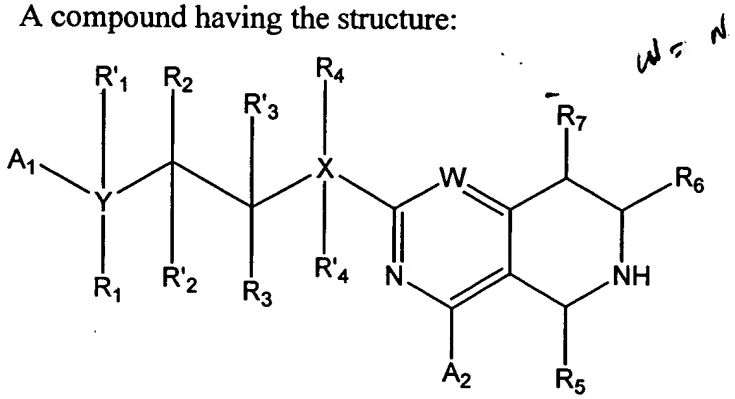
31. A compound of claim 1, wherein R_6 is selected from the group consisting of amidino, guanidino, cycloimido, heterocycloimido, cycloamido, heterocycloamido, cyclothioamido and heterocyclologweralkyl.

32. A compound of claim 1, wherein R_6 is aryl.

33. A compound of claim 1, wherein R_6 is heteroaryl.

34. A compound of claim 33, wherein R_6 is selected from the group consisting of substituted or unsubstituted pyridyl, pyrimidinyl, thiazolyl, indolyl, imidazolyl, oxadiazolyl, tetrazolyl, pyrazinyl, triazolyl, thienyl, furanyl, quinolinyl, pyrrolylpyridyl, benzothiazolyl, benzopyridyl, benzotriazolyl, and benzimidazolyl.

35. A compound having the structure:



(I)

wherein:

W is optionally substituted carbon, nitrogen or sulfur;

X and Y are independently selected from the group consisting of nitrogen, oxygen, and optionally substituted carbon;

A_1 and A_2 are optionally substituted aryl, aryloxy, arylamino or heteroaryl;

R_1, R_2, R_3 and R_4 are independently selected from the group consisting of hydrogen, hydroxyl, and optionally substituted loweralkyl, cycloloweralkyl, alkylaminoalkyl, loweralkoxy, amino, alkylamino, alkylcarbonyl, arylcarbonyl, aralkylcarbonyl, heteroarylcarbonyl, heteroaralkylcarbonyl, aryl and heteroaryl;

R'_1, R'_2, R'_3 and R'_4 are independently selected from the group consisting of hydrogen, and optionally substituted loweralkyl;

R_5, R_6 R_7 and are independently selected from the group consisting of hydrogen, hydroxy, halo, carboxyl, nitro, amino, amido, amidino, imido, cyano, and substituted or unsubstituted loweralkyl, loweralkoxy, alkylcarbonyl, arylcarbonyl, aralkylcarbonyl, heteroarylcarbonyl, heteraralkylcarbonyl, alkylcarbonyloxy, arylcarbonyloxy, aralkylcarbonyloxy, alkylaminocarbonyloxy, arylaminocarbonyloxy, formyl, loweralkylcarbonyl, loweralkoxycarbonyl,

aminocarbonyl, aminoaryl, alkylsulfonyl, sulfonamido, aminoalkoxy, alkylamino, arylamino, aralkylamino, heteroarylamino, heteroaralkylamino, alkylcarbonylamino, alkylaminocarbonylamino, arylaminocarbonylamino, aralkylcarbonylamino, heteroaralkylcarbonylamino, arylcarbonylamino, heteroarylcarbonylamino, amidino, cycloalkyl, cycloamido, cyclothioamido, cycloamidino, heterocycloamidino, cycloimido, heterocycloimido, guanidinyl, aryl, biaryl, heteroaryl, heterobiaryl, heterocyclo, heterocycloalkyl, arylsulfonyl and arylsulfonamido;

and the pharmaceutically acceptable salts thereof.

36. A compound of claim 35 wherein at least one of X and Y is nitrogen.

37. A compound of claim 36 wherein one of X and Y is nitrogen and the other of X and Y is optionally substituted carbon.

38. A compound of claim 36 wherein one of X and Y is nitrogen and the other of X and Y is oxygen.

39. A compound of claim 36, wherein both X and Y are nitrogen.

40. A compound of claim 35, wherein at least one of A_1 and A_2 is an aromatic ring having from 3 to 10 carbon ring atoms and optionally 1 or more ring heteroatoms.

41. A compound of claim 40, wherein at least one of A_1 and A_2 is optionally substituted carbocyclic aryl, arylamino or aryloxy.

42. A compound of claim 40, wherein at least one of A_1 and A_2 is optionally substituted heteroaryl.

43. A compound of claim 40, wherein at least one of A_1 and A_2 is selected from the group consisting of substituted or unsubstituted phenylamino and phenyloxy.

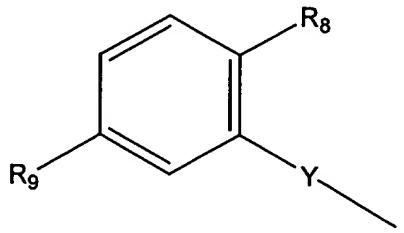
44. A compound of claim 40, wherein at least one of A_1 and A_2 is selected from the group consisting of substituted or unsubstituted pyridyl, pyrimidinyl, thiazolyl, indolyl, imidazolyl, oxadiazolyl, tetrazolyl, pyrazinyl,

triazolyl, thiophenyl, furanyl, quinolinyl, purinyl, naphthyl, benzothiazolyl, benzopyridyl, and benzimidazolyl.

45. A compound of claim 40, wherein at least one of A_1 and A_2 is substituted with at least one and not more than 3 substitution groups.

46. A compound of claim 45, wherein said substitution groups are independently selected from the group consisting of nitro, amino, cyano, halo, thioamido, amidino, oxamidino, alkoxyamidino, imidino, guanidino, sulfonamido, carboxyl, formyl, loweralkyl, halologweralkyl, loweralkoxy, halologweralkoxy, loweralkoxyalkyl, loweralkylaminologweralkoxy, loweralkylcarbonyl, loweraralkylcarbonyl, lowerheteroaralkylcarbonyl, alkylthio, aminoalkyl and cyanoalkyl.

47. A compound of claim 40 wherein at least one of A_1 and A_2 has the formula:



(II)

wherein Y is -NH or -O-; and

R_8 and R_9 are independently selected from the group consisting of hydrogen, nitro, amino, cyano, halo, thioamido, amidino, oxamidino, alkoxyamidino, imidino, guanidinyl, sulfonamido, carboxyl, formyl, loweralkyl, halologweralkyl, loweralkoxy, halologweralkoxy, loweralkoxyalkyl,loweralkylaminologweralkoxy, loweralkylcarbonyl, loweraralkylcarbonyl, lowerheteroaralkylcarbonyl, alkylthio, aryl and, aralkyl.

48. A compound of claim 47, wherein A_1 and A_2 are selected from the group consisting of halo and halologweralkyl.

49. A compound of claim 48, wherein A_1 and A_2 are halo.

50. A compound of claim 47, wherein at least one of A_1 and A_2 is selected from the group consisting of 2,5-dichlorophenylamino and 2,5-dichlorophenyloxy.

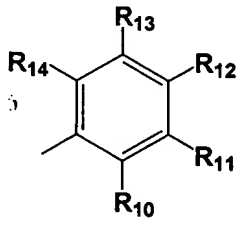
51. A compound of claim 35, wherein at least one of R_1, R_2, R_3 and R_4 is substituted loweralkyl selected from the group consisting of hydrogen, unsubstituted or substituted loweralkyl, haloloweralkyl, heterocycloaminoalkyl, and loweralkylaminoloweralkyl.

52. A compound of claim 51, wherein at least one of R_1, R_2, R_3 and R_4 is loweralkylaminoloweralkyl.

53. A compound of claim 51, wherein R_1, R_2, and R_3 are hydrogen and R_4 is selected from the group consisting of hydrogen, methyl, ethyl, aminoethyl, dimethylaminoethyl, pyridylethyl, piperidinyl, pyrrolidinylethyl, piperazinylethyl and morpholinylethyl.

54. A compound of claim 35, wherein at least one of R_5 and R_7 is selected from the group consisting of substituted and unsubstituted aryl, heteroaryl and biaryl.

55. A compound of claim 54 wherein at least one of R_5 and R_7 is a substituted or unsubstituted moiety of the formula:



(III)

wherein R_{10}, R_{11}, R_{12}, R_{13}, and R_{14} are independently selected from the group consisting of hydrogen, nitro, amino, cyano, halo, thioamido, carboxyl, hydroxy, and optionally substituted loweralkyl, loweralkoxy, loweralkoxyalkyl, haloloweralkyl, haloloweralkoxy, aminoalkyl, alkylamino, alkylthio, alkylcarbonylamino, aralkyl-carbonylamino, heteroaralkylcarbonylamino, arylcarbonylamino, heteroarylcarbonylamino aminocarbonyl, loweralkylaminocarbonyl, aminoaralkyl, , loweralkylaminoalkyl, aryl, heteroaryl, cycloheteroalkyl, aralkyl, alkylcarbonyloxy, arylcarbonyloxy, aralkylcarbonyloxy, arylcarbonyloxyalkyl, alkylcarbonyloxyalkyl, heteroarylcarbonyloxyalkyl, aralkycarbonyloxyalkyl, and heteroaralkcarbonyl-oxyalkyl.

56. A compound of claim 55 wherein R_{10}, R_{11}, R_{13}, and R_{14} are hydrogen and R_{12} is selected from the group consisting of halo, loweralkyl, hydroxy, loweralkoxy, halologweralkyl, aminocarbonyl, alkylaminocarbonyl and cyano.

57. A compound of claim 55 wherein R_{11}, R_{13}, and R_{14} are hydrogen and R_{10} and R_{12} are independently selected from the group consisting of halo, loweralkyl, hydroxy, loweralkoxy, halologweralkyl and cyano.

58. A compound of claim 55 wherein R_{10}, R_{11}, R_{13}, and R_{14} are hydrogen and R_{12} is heteroaryl.

59. A compound of claim 55 wherein R_{10}, R_{11}, R_{13}, and R_{14} are hydrogen and R_{12} is a heterocycloalkyl.

60. A compound of claim 55 wherein at least one of R_{10}, R_{11}, R_{12}, R_{13}, and R_{14} are halo and the remainder of R_{10}, R_{11}, R_{12}, R_{13}, and R_{14} are hydrogen.

61. A compound of claim 55 wherein at least one of R_5 and R_7 is selected from the group consisting of dichlorophenyl, difluorophenyl, trifluoromethylphenyl, chlorofluorophenyl, bromochlorophenyl, ethylphenyl, methylchlorophenyl, imidazolylphenyl, cyanophenyl, morphlinophenyl and cyanochlorophenyl.

62. A compound of claim 35, wherein R_6 is substituted alkyl selected from the group consisting of aralkyl, hydroxyalkyl, aminoalkyl, aminoaralkyl, carbonylaminoalkyl, alkylcarbonylaminoalkyl, arylcarbonylaminoalkyl, aralkylcarbonylaminoalkyl, aminoalkoxyalkyl and arylaminoalkyl.

63. A compound of claim 35, wherein R_6 is substituted amino selected from the group consisting of alkylamino, alkylcarbonylamino, alkoxycarbonylamino, arylalkylamino, arylcarbonylamino, alkylthiocarbonylamino, arylsulfonylamino, heteroarylamino alkylcarbonylamino, arylcarbonylamino, heteroarylcarbonylamino, aralkylcarbonylamino, and heteroaralkylcarbonylamino.

64. A compound of claim 35, wherein R_6 is selected from the group consisting of unsubstituted or substituted aminocarbonyl, alkyloxycarbonyl, aryloxycarbonyl, aralkyloxycarbonyl and alkylaminoalkyloxycarbonyl.

65. A compound of claim 35, wherein R_6 is selected from the group consisting of amidino, guanidino, cycloimido, heterocycloimido, cycloamido, heterocycloamido, cyclothioamido and heterocyclololoweralkyl.

66. A compound of claim 35, wherein R_6 is aryl.

67. A compound of claim 35, wherein R_6 is heteroaryl.

68. A compound of claim 67, wherein R_6 is selected from the group consisting of substituted or unsubstituted pyridyl, pyrimidinyl, thiazolyl, indolyl, imidazolyl, oxadiazolyl, tetrazolyl, pyrazinyl, triazolyl, thienyl, furanyl, quinolinyl, pyrrolylpyridyl, benzothiazolyl, benzopyridyl, benzotriazolyl, and benzimidazolyl.

69. A composition comprising an amount of a compound of claim 1 effective to modulate GSK3 activity in a human or animal subject when administered thereto, together with a pharmaceutically acceptable carrier.

70. A method of inhibiting GSK3 activity in a human or animal subject, comprising administering to the human or animal subject a composition of claim 69.

71. A method of treating a cell comprising administering to the cell an amount of a compound of claim 1 effective to inhibit GSK3 activity in the cell.

72. A method for treating a GSK3-mediated disorder in a human or animal subject, comprising administering to the human or animal subject an amount of a composition of claim 69 effective to inhibit GSK3 activity in the subject.

73. A method of claim 72, wherein the composition is administered by a mode of administration selected from the group consisting of oral, subcutaneous, transdermal, transmucosal, iontophoretic, intravenous, intrathecal, buccal, sublingual, intranasal, and rectal administration.

74. A method of claim 72, wherein said GSK3-mediated disorder is selected from the group consisting of diabetes, Alzheimer's disease, obesity, atherosclerotic cardiovascular disease, essential hypertension, polycystic ovary

syndrome, syndrome X, ischemia, traumatic brain injury, bipolar disorder, immunodeficiency and cancer.

75. A method of claim 74, which further comprises administering to the subject one or more additional active agents.

76. A method of claim 75, wherein the GSK3-mediated disorder is diabetes and the additional active agent is selected from the group consisting of insulin, troglitazone, rosiglitazone, pioglitazone, glipizide and metformin.

77. A compound of claim 1 for use as a pharmaceutical.

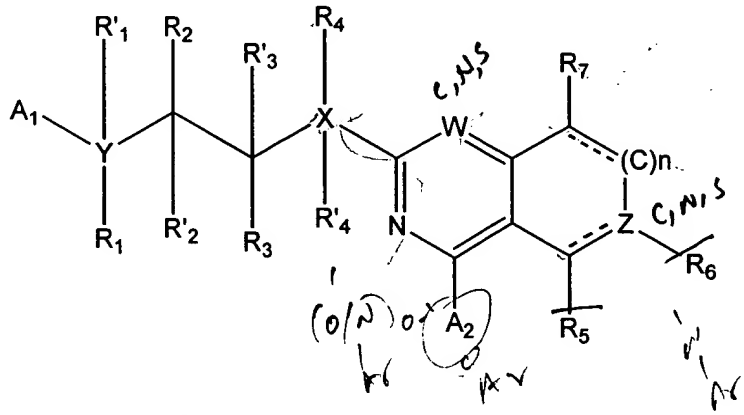
78. Use of a compound of claim 1 in the manufacture of a medicament for the treatment of diabetes, Alzheimer's disease and other neurodegenerative disorders, obesity, atherosclerotic cardiovascular disease, essential hypertension, polycystic ovary syndrome, syndrome X, ischemia, traumatic brain injury, bipolar disorder or cancer.

09/738,066
Nuss et al; filed 12/15/00
Appl. claims benefit of 60/172,403, 12/17/99

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

That which is claimed is:

1. A compound having the structure:



(I)

wherein:

W and Z are optionally substituted carbon, nitrogen or sulfur;

X and Y are independently selected from the group consisting of nitrogen, oxygen, and optionally substituted carbon;

n is 0, 1 or 2;

A_1 and A_2 are optionally substituted aryl, aryloxy, arylamino or heteroaryl;

R_1, R_2, R_3 and R_4 are independently selected from the group consisting of hydrogen, hydroxyl, and optionally substituted loweralkyl, cycloloweralkyl, alkylaminoalkyl, loweralkoxy, amino, alkylamino, alkylcarbonyl, arylcarbonyl, aralkylcarbonyl, heteroarylcarbonyl, heteroaralkylcarbonyl, aryl and heteroaryl;

R'_1, R'_2, R'_3 and R'_4 are independently selected from the group consisting of hydrogen, and optionally substituted loweralkyl;

R_5, R_6 R_7 and are independently selected from the group consisting of hydrogen, hydroxy, halo, carboxyl, nitro, amino, amido, amidino, imido, cyano, and substituted or unsubstituted loweralkyl, loweralkoxy, alkylcarbonyl, arylcarbonyl, aralkylcarbonyl, heteroarylcarbonyl, heteraralkylcarbonyl, alkylcarbonyloxy, arylcarbonyloxy, aralkylcarbonyloxy, alkylaminocarbonyloxy, arylaminocarbonyloxy, formyl, loweralkylcarbonyl, loweralkoxycarbonyl, aminocarbonyl, aminoaryl, alkylsulfonyl, sulfonamido, aminoalkoxy, alkylamino, arylamino, aralkylamino, heteroarylamino, heteroaralkylamino, alkylcarbonylamino, alkylaminocarbonylamino, arylaminocarbonylamino, aralkylcarbonylamino, heteroaralkylcarbonylamino, arylcarbonylamino, heteroarylcarbonylamino, amidino, cycloalkyl, cycloamido, cyclothioamido, cycloamidino, heterocycloamidino,

cycloimido, heterocycloimido, guanidinyl, aryl, biaryl, heteroaryl, heterobiaryl, heterocyclo, heterocycloalkyl, arylsulfonyl and arylsulfonamido;

and the pharmaceutically acceptable salts thereof.

2. A compound of claim 1 wherein at least one of X and Y is nitrogen.

3. A compound of claim 2 wherein one of X and Y is nitrogen and the other of X and Y is optionally substituted carbon.

4. A compound of claim 2 wherein one of X and Y is nitrogen and the other of X and Y is oxygen.

5. A compound of claim 2, wherein both X and Y are nitrogen.

6. A compound of claim 1, wherein at least one of A_1 and A_2 is an aromatic ring having from 3 to 10 carbon ring atoms and optionally 1 or more ring heteroatoms.

7. A compound of claim 6, wherein at least one of A_1 and A_2 is optionally substituted carbocyclic aryl, arylamino or aryloxy.

8. A compound of claim 6, wherein at least one of A_1 and A_2 is optionally substituted heteroaryl.

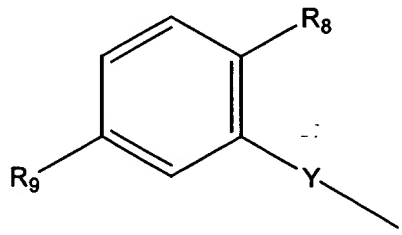
9. A compound of claim 6, wherein at least one of A_1 and A_2 is selected from the group consisting of substituted or unsubstituted phenylamino and phenyloxy.

10. A compound of claim 6, wherein at least one of A_1 and A_2 is selected from the group consisting of substituted or unsubstituted pyridyl, pyrimidinyl, thiazolyl, indolyl, imidazolyl, oxadiazolyl, tetrazolyl, pyrazinyl, triazolyl, thiophenyl, furanyl, quinolinyl, purinyl, naphthyl, benzothiazolyl, benzopyridyl, and benzimidazolyl.

11. A compound of claim 6, wherein at least one of A_1 and A_2 is substituted with at least one and not more than 3 substitution groups.

12. A compound of claim 11, wherein said substitution groups are independently selected from the group consisting of nitro, amino, cyano, halo, thioamido, amidino, oxamidino, alkoxyamidino, imidino, guanidino, sulfonamido, carboxyl, formyl, loweralkyl, halologweralkyl, loweralkoxy, halologweralkoxy, loweralkoxyalkyl, loweralkylaminoloweralkoxy, loweralkylcarbonyl, loweraralkylcarbonyl, lowerheteroaralkylcarbonyl, alkylthio, aminoalkyl and cyanoalkyl.

13. A compound of claim 6 wherein at least one of A_1 and A_2 has the formula:



(II)

wherein Y is -NH or -O-; and

R_8 and R_9 are independently selected from the group consisting of hydrogen, nitro, amino, cyano, halo, thioamido, amidino, oxamidino, alkoxyamidino, imidino, guanidinyl, sulfonamido, carboxyl, formyl, loweralkyl, halologweralkyl, loweralkoxy, halologweralkoxy, loweralkoxyalkyl,loweralkylaminoloweralkoxy, loweralkylcarbonyl, loweraralkylcarbonyl, lowerheteroaralkylcarbonyl, alkylthio, aryl and, aralkyl.

14. A compound of claim 13, wherein A_1 and A_2 are selected from the group consisting of halo and halologweralkyl.

15. A compound of claim 14, wherein A_1 and A_2 are halo.

16. A compound of claim 13, wherein at least one of A_1 and A_2 is selected from the group consisting of 2,5-dichlorophenylamino and 2,5-dichlorophenyloxy.

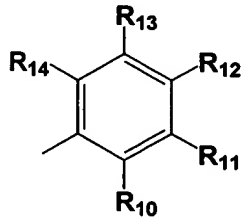
17. A compound of claim 1, wherein at least one of R_1, R_2, R_3 and R_4 is substituted loweralkyl selected from the group consisting of hydrogen, unsubstituted or substituted loweralkyl, halologweralkyl, heterocycloaminoalkyl, and loweralkylaminoloweralkyl.

18. A compound of claim17, wherein at least one of R_1, R_2, R_3 and R_4 is loweralkylaminoloweralkyl.

19. A compound of claim17, wherein R_1, R_2, and R_3 are hydrogen and R_4 is selected from the group consisting of hydrogen, methyl, ethyl, aminoethyl, dimethylaminoethyl, pyridylethyl, piperidinyl, pyrrolidinylethyl, piperazinylethyl and morpholinylethyl.

20. A compound of claim 1, wherein at least one of R_5 and R_7 is selected from the group consisting of substituted and unsubstituted aryl, heteroaryl and biaryl.

21. A compound of claim 20 wherein at least one of R_5 and R_7 is a substituted or unsubstituted moiety of the formula:



(III)

wherein R_{10}, R_{11}, R_{12}, R_{13}, and R_{14} are independently selected from the group consisting of hydrogen, nitro, amino, cyano, halo, thioamido, carboxyl, hydroxy, and optionally substituted loweralkyl, loweralkoxy, loweralkoxyalkyl, haloloweralkyl, haloloweralkoxy, aminoalkyl, alkylamino, alkylthio, alkylcarbonylamino, aralkyl-carbonylamino, heteroaralkylcarbonylamino, arylcarbonylamino, heteroarylcarbonylamino aminocarbonyl, loweralkylaminocarbonyl, aminoaralkyl, , loweralkylaminoalkyl, aryl, heteroaryl, cycloheteroalkyl, aralkyl, alkylcarbonyloxy, arylcarbonyloxy, aralkylcarbonyloxy, arylcarbonyloxyalkyl, alkylcarbonyloxyalkyl, heteroarylcarbonyloxyalkyl, aralkycarbonyloxyalkyl, and heteroaralkcarbonyl-oxyalkyl.

22. A compound of claim 21 wherein R_{10}, R_{11}, R_{13}, and R_{14} are hydrogen and R_{12} is selected from the group consisting of halo, loweralkyl, hydroxy, loweralkoxy, haloloweralkyl, aminocarbonyl, alkylaminocarbonyl and cyano.

23. A compound of claim 21 wherein R_{11}, R_{13}, and R_{14} are hydrogen and R_{10} and R_{12} are independently selected from the group consisting of halo, loweralkyl, hydroxy, loweralkoxy, haloloweralkyl and cyano.

24. A compound of claim 21 wherein R_{10}, R_{11}, R_{13}, and R_{14} are hydrogen and R_{12} is heteroaryl.

25. A compound of claim 21 wherein R_{10}, R_{11}, R_{13}, and R_{14} are hydrogen and R_{12} is a heterocycloalkyl.

26. A compound of claim 21 wherein at least one of R_{10}, R_{11}, R_{12}, R_{13}, and R_{14} are halo and the remainder of R_{10}, R_{11}, R_{12}, R_{13}, and R_{14} are hydrogen.

27. A compound of claim 21 wherein at least one of R_5 and R_7 is selected from the group consisting of dichlorophenyl, difluorophenyl, trifluoromethylphenyl, chlorofluorophenyl, bromochlorophenyl, ethylphenyl, methylchlorophenyl, imidazolylphenyl, cyanophenyl, morphlinophenyl and cyanochlorophenyl.

28. A compound of claim 1, wherein R_6 is substituted alkyl selected from the group consisting of aralkyl, hydroxyalkyl, aminoalkyl, aminoaralkyl, carbonylaminoalkyl, alkylcarbonylaminoalkyl, arylcarbonylaminoalkyl, aralkylcarbonylaminoalkyl, aminoalkoxyalkyl and arylaminoalkyl.

29. A compound of claim 1, wherein R_6 is substituted amino selected from the group consisting of alkylamino, alkylcarbonylamino, alkoxycarbonylamino, arylalkylamino, arylcarbonylamino, alkylthiocarbonylamino, arylsulfonylamino, heteroarylamino alkylcarbonylamino, arylcarbonylamino, heteroarylcarbonylamino, aralkylcarbonylamino, and heteroaralkylcarbonylamino.

30. A compound of claim 1, wherein R_6 is selected from the group consisting of unsubstituted or substituted aminocarbonyl, alkyloxycarbonyl, aryloxycarbonyl, aralkyloxycarbonyl and alkylaminoalkyloxycarbonyl.

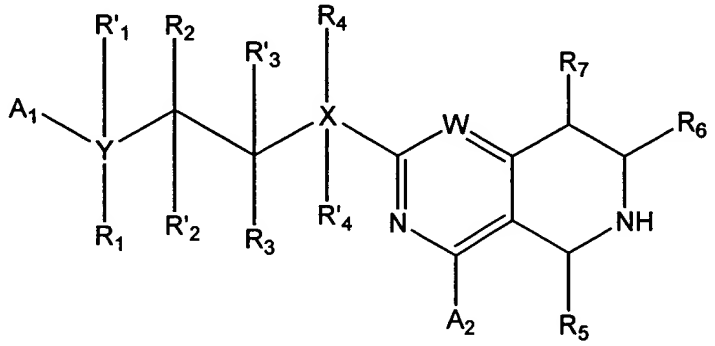
31. A compound of claim 1, wherein R_6 is selected from the group consisting of amidino, guanidino, cycloimido, heterocycloimido, cycloamido, heterocycloamido, cyclothioamido and heterocycloloweralkyl.

32. A compound of claim 1, wherein R_6 is aryl.

33. A compound of claim 1, wherein R_6 is heteroaryl.

34. A compound of claim 33, wherein R_6 is selected from the group consisting of substituted or unsubstituted pyridyl, pyrimidinyl, thiazolyl, indolyl, imidazolyl, oxadiazolyl, tetrazolyl, pyrazinyl, triazolyl, thienyl, furanyl, quinolinyl, pyrrolylpyridyl, benzothiazolyl, benzopyridyl, benzotriazolyl, and benzimidazolyl.

35. A compound having the structure:



(I)

wherein:

W is optionally substituted carbon, nitrogen or sulfur;

X and Y are independently selected from the group consisting of nitrogen, oxygen, and optionally substituted carbon;

A_1 and A_2 are optionally substituted aryl, aryloxy, arylamino or heteroaryl;

R_1, R_2, R_3 and R_4 are independently selected from the group consisting of hydrogen, hydroxyl, and optionally substituted loweralkyl, cycloloweralkyl, alkylaminoalkyl, loweralkoxy, amino, alkylamino, alkylcarbonyl, arylcarbonyl, aralkylcarbonyl, heteroarylcarbonyl, heteroaralkylcarbonyl, aryl and heteroaryl;

R'_1, R'_2, R'_3 and R'_4 are independently selected from the group consisting of hydrogen, and optionally substituted loweralkyl;

R_5, R_6 R_7 and are independently selected from the group consisting of hydrogen, hydroxy, halo, carboxyl, nitro, amino, amido, amidino, imido, cyano, and substituted or unsubstituted loweralkyl, loweralkoxy, alkylcarbonyl, arylcarbonyl, aralkylcarbonyl, heteroarylcarbonyl, heteraralkylcarbonyl, alkylcarbonyloxy, arylcarbonyloxy, aralkylcarbonyloxy, alkylaminocarbonyloxy, arylaminocarbonyloxy, formyl, loweralkylcarbonyl, loweralkoxycarbonyl,

aminocarbonyl, aminoaryl, alkylsulfonyl, sulfonamido, aminoalkoxy, alkylamino, arylamino, aralkylamino, heteroarylamino, heteroaralkylamino, alkylcarbonylamino, alkylaminocarbonylamino, arylaminocarbonylamino, aralkylcarbonylamino, heteroaralkylcarbonylamino, arylcarbonylamino, heteroarylcarbonylamino, amidino, cycloalkyl, cycloamido, cyclothioamido, cycloamidino, heterocycloamidino, cycloimido, heterocycloimido, guanidinyl, aryl, biaryl, heteroaryl, heterobiaryl, heterocyclo, heterocycloalkyl, arylsulfonyl and arylsulfonamido;

and the pharmaceutically acceptable salts thereof.

36. A compound of claim 35 wherein at least one of X and Y is nitrogen.

37. A compound of claim 36 wherein one of X and Y is nitrogen and the other of X and Y is optionally substituted carbon.

38. A compound of claim 36 wherein one of X and Y is nitrogen and the other of X and Y is oxygen.

39. A compound of claim 36, wherein both X and Y are nitrogen.

40. A compound of claim 35, wherein at least one of A_1 and A_2 is an aromatic ring having from 3 to 10 carbon ring atoms and optionally 1 or more ring heteroatoms.

41. A compound of claim 40, wherein at least one of A_1 and A_2 is optionally substituted carbocyclic aryl, arylamino or aryloxy.

42. A compound of claim 40, wherein at least one of A_1 and A_2 is optionally substituted heteroaryl.

43. A compound of claim 40, wherein at least one of A_1 and A_2 is selected from the group consisting of substituted or unsubstituted phenylamino and phenyloxy.

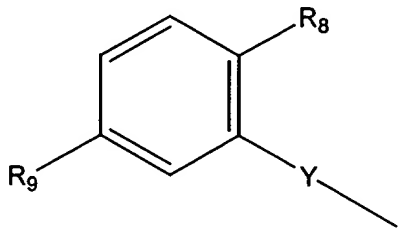
44. A compound of claim 40, wherein at least one of A_1 and A_2 is selected from the group consisting of substituted or unsubstituted pyridyl, pyrimidinyl, thiazolyl, indolyl, imidazolyl, oxadiazolyl, tetrazolyl, pyrazinyl,

triazolyl, thiophenyl, furanyl, quinolinyl, purinyl, naphthyl, benzothiazolyl, benzopyridyl, and benzimidazolyl.

45. A compound of claim 40, wherein at least one of A_1 and A_2 is substituted with at least one and not more than 3 substitution groups.

46. A compound of claim 45, wherein said substitution groups are independently selected from the group consisting of nitro, amino, cyano, halo, thioamido, amidino, oxamidino, alkoxyamidino, imidino, guanidino, sulfonamido, carboxyl, formyl, loweralkyl, haloloweralkyl, loweralkoxy, haloloweralkoxy, loweralkoxyalkyl, loweralkylaminoloweralkoxy, loweralkylcarbonyl, loweraralkylcarbonyl, lowerheteroaralkylcarbonyl, alkylthio, aminoalkyl and cyanoalkyl.

47. A compound of claim 40 wherein at least one of A_1 and A_2 has the formula:



(II)

wherein Y is -NH or -O-; and

R_8 and R_9 are independently selected from the group consisting of hydrogen, nitro, amino, cyano, halo, thioamido, amidino, oxamidino, alkoxyamidino, imidino, guanidinyl, sulfonamido, carboxyl, formyl, loweralkyl, haloloweralkyl, loweralkoxy, halooweralkoxy, loweralkoxyalkyl,loweralkylaminoloweralkoxy, loweralkylcarbonyl, loweraralkylcarbonyl, lowerheteroaralkylcarbonyl, alkylthio, aryl and, aralkyl.

48. A compound of claim 47, wherein A_1 and A_2 are selected from the group consisting of halo and halooweralkyl.

49. A compound of claim 48, wherein A_1 and A_2 are halo.

50. A compound of claim 47, wherein at least one of A_1 and A_2 is selected from the group consisting of 2,5-dichlorophenylamino and 2,5-dichlorophenyloxy.

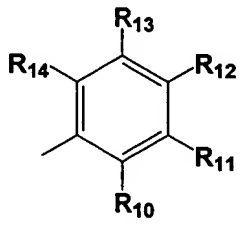
51. A compound of claim 35, wherein at least one of R_1, R_2, R_3 and R_4 is substituted loweralkyl selected from the group consisting of hydrogen, unsubstituted or substituted loweralkyl, halologweralkyl, heterocycloaminoalkyl, and loweralkylaminoloweralkyl.

52. A compound of claim 51, wherein at least one of R_1, R_2, R_3 and R_4 is loweralkylaminoloweralkyl.

53. A compound of claim 51, wherein R_1, R_2, and R_3 are hydrogen and R_4 is selected from the group consisting of hydrogen, methyl, ethyl, aminoethyl, dimethylaminoethyl, pyridylethyl, piperidinyl, pyrrolidinylethyl, piperazinylethyl and morpholinylethyl.

54. A compound of claim 35, wherein at least one of R_5 and R_7 is selected from the group consisting of substituted and unsubstituted aryl, heteroaryl and biaryl.

55. A compound of claim 54 wherein at least one of R_5 and R_7 is a substituted or unsubstituted moiety of the formula:



(III)

wherein R_{10}, R_{11}, R_{12}, R_{13}, and R_{14} are independently selected from the group consisting of hydrogen, nitro, amino, cyano, halo, thioamido, carboxyl, hydroxy, and optionally substituted loweralkyl, loweralkoxy, loweralkoxyalkyl, halologweralkyl, halologweralkoxy, aminoalkyl, alkylamino, alkylthio, alkylcarbonylamino, aralkyl-carbonylamino, heteroaralkylcarbonylamino, arylcarbonylamino, heteroarylcarbonylamino aminocarbonyl, loweralkylaminocarbonyl, aminoaralkyl, , loweralkylaminoalkyl, aryl, heteroaryl, cycloheteroalkyl, aralkyl, alkylcarbonyloxy, arylcarbonyloxy, aralkylcarbonyloxy, arylcarbonyloxyalkyl, alkylcarbonyloxyalkyl, heteroarylcarbonyloxyalkyl, aralkycarbonyloxyalkyl, and heteroaralkcarbonyl-oxyalkyl.

56. A compound of claim 55 wherein R_{10}, R_{11}, R_{13}, and R_{14} are hydrogen and R_{12} is selected from the group consisting of halo, loweralkyl, hydroxy, loweralkoxy, halologweralkyl, aminocarbonyl, alkylaminocarbonyl and cyano.

57. A compound of claim 55 wherein R_{11}, R_{13}, and R_{14} are hydrogen and R_{10} and R_{12} are independently selected from the group consisting of halo, loweralkyl, hydroxy, loweralkoxy, halologweralkyl and cyano.

58. A compound of claim 55 wherein R_{10}, R_{11}, R_{13}, and R_{14} are hydrogen and R_{12} is heteroaryl.

59. A compound of claim 55 wherein R_{10}, R_{11}, R_{13}, and R_{14} are hydrogen and R_{12} is a heterocycloalkyl.

60. A compound of claim 55 wherein at least one of R_{10}, R_{11}, R_{12}, R_{13}, and R_{14} are halo and the remainder of R_{10}, R_{11}, R_{12}, R_{13}, and R_{14} are hydrogen.

61. A compound of claim 55 wherein at least one of R_5 and R_7 is selected from the group consisting of dichlorophenyl, difluorophenyl, trifluoromethylphenyl, chlorofluorophenyl, bromochlorophenyl, ethylphenyl, methylchlorophenyl, imidazolylphenyl, cyanophenyl, morphlinophenyl and cyanochlorophenyl.

62. A compound of claim 35, wherein R_6 is substituted alkyl selected from the group consisting of aralkyl, hydroxyalkyl, aminoalkyl, aminoaralkyl, carbonylaminoalkyl, alkylcarbonylaminoalkyl, arylcarbonylaminoalkyl, aralkylcarbonylaminoalkyl, aminoalkoxyalkyl and arylaminoalkyl.

63. A compound of claim 35, wherein R_6 is substituted amino selected from the group consisting of alkylamino, alkylcarbonylamino, alkoxycarbonylamino, arylalkylamino, arylcarbonylamino, alkylthiocarbonylamino, arylsulfonylamino, heteroarylamino alkylcarbonylamino, arylcarbonylamino, heteroarylcarbonylamino, aralkylcarbonylamino, and heteroaralkylcarbonylamino.

64. A compound of claim 35, wherein R_6 is selected from the group consisting of unsubstituted or substituted aminocarbonyl, alkyloxycarbonyl, aryloxycarbonyl, aralkyloxycarbonyl and alkylaminoalkyloxycarbonyl.

65. A compound of claim 35, wherein R_6 is selected from the group consisting of amidino, guanidino, cycloimido, heterocycloimido, cycloamido, heterocycloamido, cyclothioamido and heterocyclooloweralkyl.

66. A compound of claim 35, wherein R_6 is aryl.

67. A compound of claim 35, wherein R_6 is heteroaryl.

68. A compound of claim 67, wherein R_6 is selected from the group consisting of substituted or unsubstituted pyridyl, pyrimidinyl, thiazolyl, indolyl, imidazolyl, oxadiazolyl, tetrazolyl, pyrazinyl, triazolyl, thienyl, furanyl, quinolinyl, pyrrolylpyridyl, benzothiazolyl, benzopyridyl, benzotriazolyl, and benzimidazolyl.

69. 112, 2nd ph. A composition comprising an amount of a compound of claim 1 effective to modulate GSK3 activity in a human or animal subject when administered thereto, together with a pharmaceutically acceptable carrier.

70. A method of inhibiting GSK3 activity in a human or animal subject, comprising administering to the human or animal subject a composition of claim 69.

What is treatment of a cell 112, 1st

71. A method of treating a cell comprising administering to the cell an amount of a compound of claim 1 effective to inhibit GSK3 activity in the cell.

72. A method for treating a GSK3-mediated disorder in a human or animal subject, comprising administering to the human or animal subject an amount of a composition of claim 69 effective to inhibit GSK3 activity in the subject.

73. A method of claim 72, wherein the composition is administered by a mode of administration selected from the group consisting of oral, subcutaneous, transdermal, transmucosal, iontophoretic, intravenous, intrathecal, buccal, sublingual, intranasal, and rectal administration.

74. A method of claim 72, wherein said GSK3-mediated disorder is selected from the group consisting of diabetes, Alzheimer's disease, obesity, atherosclerotic cardiovascular disease, essential hypertension, polycystic ovary

syndrome, syndrome X, ischemia, traumatic brain injury, bipolar disorder, immunodeficiency and cancer.

75. A method of claim 74, which further comprises administering to the subject one or more additional active agents.

76. A method of claim 75, wherein the GSK3-mediated disorder is diabetes and the additional active agent is selected from the group consisting of insulin, troglitazone, rosiglitazone, pioglitazone, glipizide and metformin.

77. A compound of claim 1 for use as a pharmaceutical.

78. Use of a compound of claim 1 in the manufacture of a medicament for the treatment of diabetes, Alzheimer's disease and other neurodegenerative disorders, obesity, atherosclerotic cardiovascular disease, essential hypertension, polycystic ovary syndrome, syndrome X, ischemia, traumatic brain injury, bipolar disorder or cancer.

=> d bib abs hitstr 1

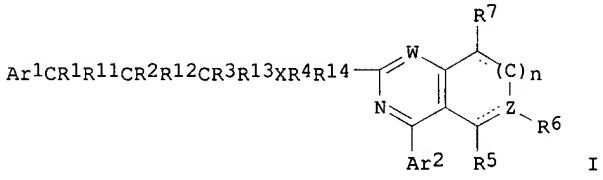
L37 ANSWER 1 OF 6 HCAPLUS COPYRIGHT 2001 ACS
AN 2001:453065 HCAPLUS
DN 135:46199
TI Bicyclic inhibitors of glycogen synthase kinase 3
IN Nuss, John M.; Zhou, Xiaohui A.
PA Chiron Corp., USA
SO PCT Int. Appl., 63 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2001044246	A1	20010621	WO 2000-US34049	20001214

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRAI US 1999-172403 P 19991217
OS MARPAT 135:46199
GI



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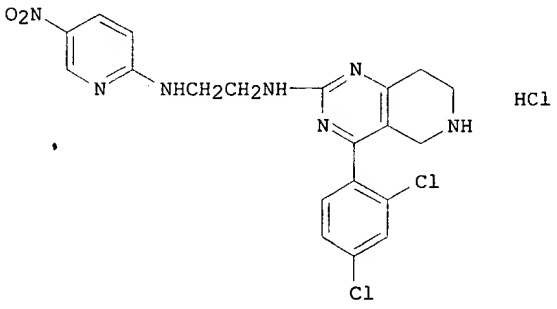


II

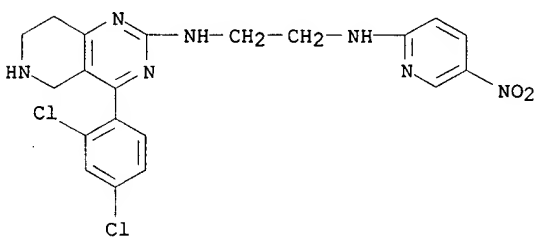
AB Bicyclic compds. I [W,X, Y, Z = (un)substituted C, N, S; n = 0-2; Ar1, Ar2 = (un)substituted aryl, aryloxy, arylamino, heteroaryl; R1-R4 = H, (un)substituted OH, alkyl, cycloalkyl, amino, acyl, aryl, heteroaryl; R11-R14 = H, (un)substituted alkyl; R5-R7 = H, OH, halo, CO2H, NO2, CN, (un)substituted alkyl, cycloalkyl, heterocyclyl, alkoxy, aryl, acyl, acyloxy, amino, amido, amidino, imido, arylsulfonyl, arylsulfonamido] were prepd. for use in inhibiting the activity of glycogen synthase kinase (GSK3) in vitro and a treatment of GSK3 mediated disorders in vivo, such as diabetes, Alzheimer's disease and other neurodegenerative disorders, obesity, atherosclerotic cardiovascular disease, essential hypertension, polycystic ovary syndrome, syndrome X, ischemia, traumatic brain injury, bipolar disorder, immunodeficiency or cancer. Thus, the pyridopyrimidine II was prepd. from Me 4-oxo-3-piperidinecarboxylate in 7 steps. I have IC50 against GSK3 of .ltoreq. 1 .mu.M.

Applicants PCT

IT **344958-30-1P 344958-31-2P 344958-32-3P**
344958-35-6P 344958-38-9P 344958-43-6P
344958-44-7P
RL: BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of pyridopyrimidines as inhibitors of glycogen synthase kinase 3)

RN 344958-30-1 HCAPLUS
CN 1,2-Ethanediamine, N-[4-(2,4-dichlorophenyl)-5,6,7,8-tetrahydropyrido[4,3-d]pyrimidin-2-yl]-N'-(5-nitro-2-pyridinyl)-, hydrochloride (9CI) (CA INDEX NAME)

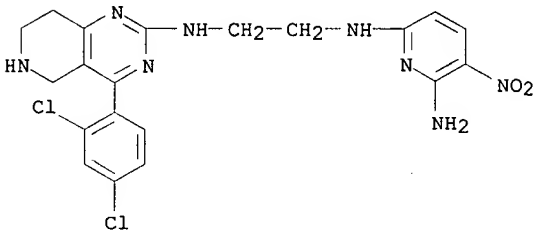
544/279
514/258



●x HCl

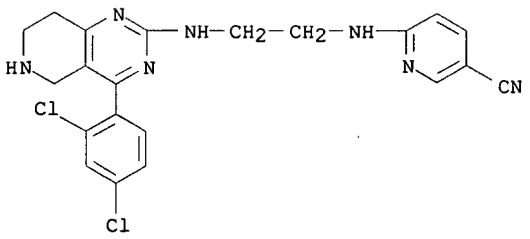
RN 344958-31-2 HCAPLUS
CN 2,6-Pyridinediamine, N6-[2-[[4-(2,4-dichlorophenyl)-5,6,7,8-tetrahydropyrido[4,3-d]pyrimidin-2-yl]amino]ethyl]-3-nitro-, hydrochloride (9CI) (CA INDEX NAME)

544/279
514/258



●x HCl

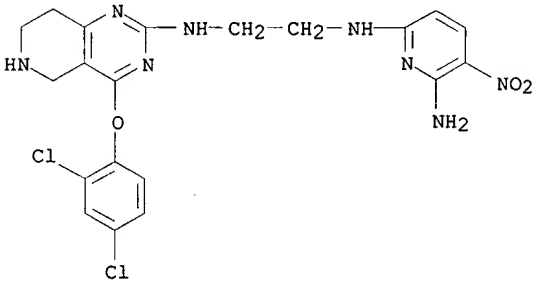
RN 344958-32-3 HCAPLUS
CN 3-Pyridinecarbonitrile, 6-[[2-[[4-(2,4-dichlorophenyl)-5,6,7,8-tetrahydropyrido[4,3-d]pyrimidin-2-yl]amino]ethyl]amino]-, hydrochloride (9CI) (CA INDEX NAME)



544/279
514/258

●x HCl

RN 344958-35-6 HCAPLUS
CN 2,6-Pyridinediamine, N6-[2-[[4-(2,4-dichlorophenoxy)-5,6,7,8-tetrahydropyrido[4,3-d]pyrimidin-2-yl]amino]ethyl]-3-nitro-, hydrochloride (9CI) (CA INDEX NAME)

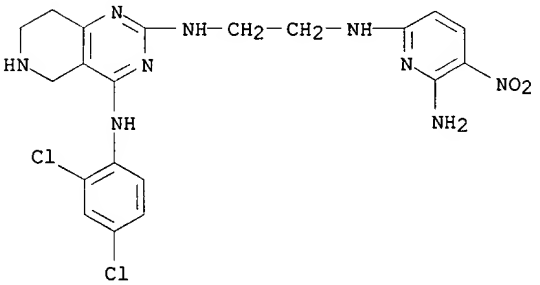


544/279
514/258

●x HCl

RN 344958-38-9 HCAPLUS
CN Pyrido[4,3-d]pyrimidine-2,4-diamine, N2-[2-[(6-amino-5-nitro-2-pyridinyl)amino]ethyl]-N4-(2,4-dichlorophenyl)-5,6,7,8-tetrahydro-, hydrochloride (9CI) (CA INDEX NAME)

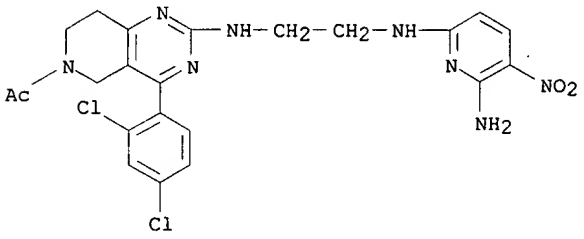
544/279



●x HCl

RN 344958-43-6 HCAPLUS
CN Pyrido[4,3-d]pyrimidin-2-amine, 6-acetyl-N-[2-[(6-amino-5-nitro-2-

pyridinyl)amino]ethyl]-4-(2,4-dichlorophenyl)-5,6,7,8-tetrahydro- (9CI) (CA INDEX NAME)



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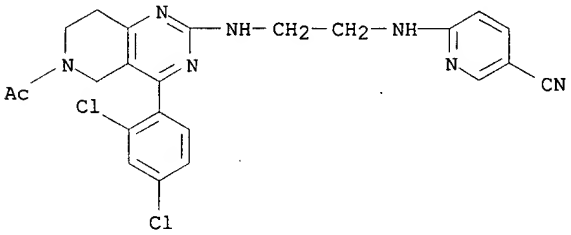
514|258

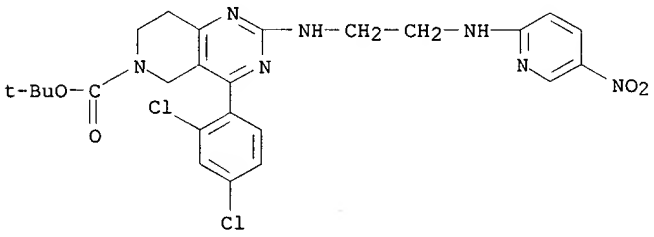
RN 344958-44-7 HCAPLUS
CN Pyrido[4,3-d]pyrimidin-2-amine, 6-acetyl-N-[2-[(5-cyano-2-pyridinyl)amino]ethyl]-4-(2,4-dichlorophenyl)-5,6,7,8-tetrahydro- (9CI) (CA INDEX NAME)



544|279
514|258

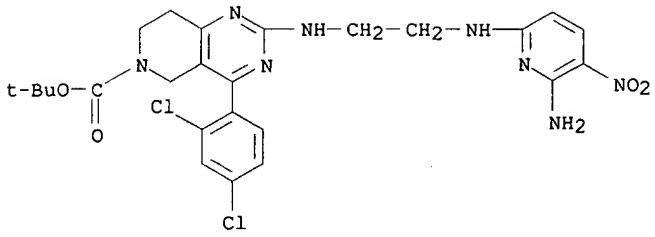
IT **344958-45-8P 344958-46-9P 344958-47-0P**
344958-48-1P 344958-49-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. of pyridopyrimidines as inhibitors of glycogen synthase kinase 3)

RN 344958-45-8 HCAPLUS
CN Pyrido[4,3-d]pyrimidine-6(5H)-carboxylic acid, 4-(2,4-dichlorophenyl)-7,8-dihydro-2-[[2-[(5-nitro-2-pyridinyl)amino]ethyl]amino]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

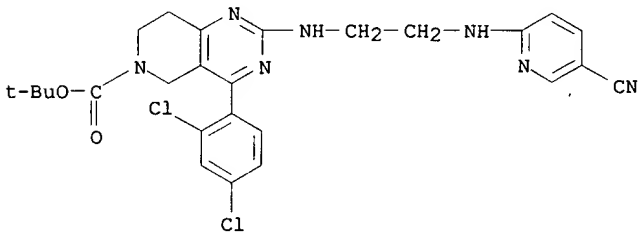


544|279
514|258

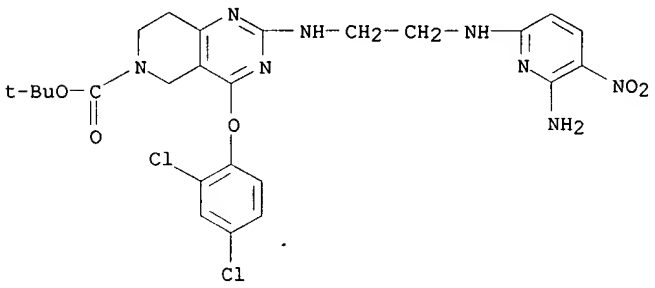
RN 344958-46-9 HCAPLUS
CN Pyrido[4,3-d]pyrimidine-6(5H)-carboxylic acid, 2-[[2-[(6-amino-5-nitro-2-pyridinyl)amino]ethyl]amino]-4-(2,4-dichlorophenyl)-7,8-dihydro-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



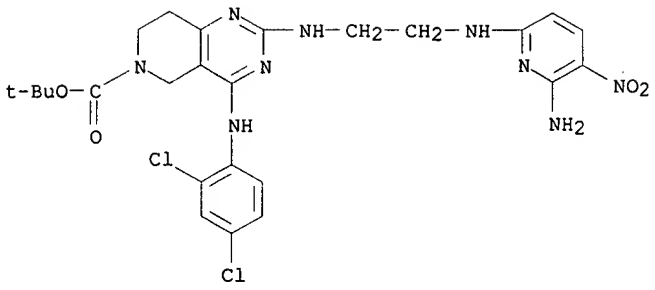
RN 344958-47-0 HCAPLUS
CN Pyrido[4,3-d]pyrimidine-6(5H)-carboxylic acid, 2-[[2-[(5-cyano-2-pyridinyl)amino]ethyl]amino]-4-(2,4-dichlorophenyl)-7,8-dihydro-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



RN 344958-48-1 HCAPLUS
CN Pyrido[4,3-d]pyrimidine-6(5H)-carboxylic acid, 2-[[2-[(6-amino-5-nitro-2-pyridinyl)amino]ethyl]amino]-4-(2,4-dichlorophenoxy)-7,8-dihydro-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



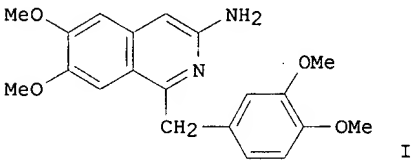
RN 344958-49-2 HCAPLUS
CN Pyrido[4,3-d]pyrimidine-5(6H)-carboxylic acid, 2-[[2-[(6-amino-5-nitro-2-pyridinyl)amino]ethyl]amino]-4-[(2,4-dichlorophenyl)amino]-7,8-dihydro-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



RE.CNT 6
RE
(1) Chiron Corp; WO 9816528 A 1998 HCAPLUS
(2) Ciba Geigy Ag; WO 9720821 A 1997 HCAPLUS
(3) Haraoka, Y; JP 40-020867 B 1966 HCAPLUS
(4) Kempter, G; JOURNAL FUER PRAKTISCHE CHEMIE 1977, V319(4), P589 HCAPLUS
(5) Ramurthy, S; WO 9965897 A 1999 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

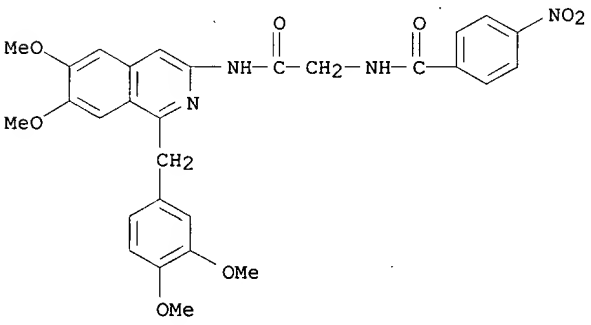
=> d bib abs hitstr 2

L37 ANSWER 2 OF 6 HCAPLUS COPYRIGHT 2001 ACS
AN 1998:100939 HCAPLUS
DN 128:192532
TI Acid-catalyzed cyclocondensation of nitriles. IV. Synthesis and spasmolytic activity of 1-substituted 3-aminoisoquinolines and their derivatives
AU Sereda, A. V.; Lapa, G. B.; Sukhov, I. E.; Belova, L. F.; Sokolov, S. Ya.; Miroshnikov, A. I.; Tolkachev, O. N.
CS NPO VILAR, Moscow, Russia
SO Khim.-Farm. Zh. (1997), 31(4), 22-27
CODEN: KHFZAN; ISSN: 0023-1134
PB Izdatel'stvo Folium
DT Journal
LA Russian
GI

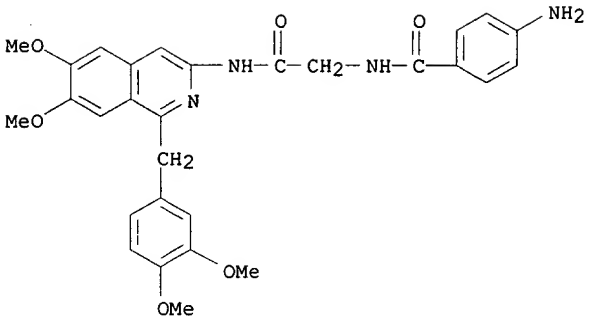


I

AB Title compds., such as I, were prepd. by cyclocondensation of (3,4-dimethoxyphenyl)acetonitrile with nitriles. The N-acyl derivs. of these products were also prepd. Spasmolytic activities were detd.
IT **203522-41-2P 203522-43-4P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and spasmolytic activity of 1-substituted 3-aminoisoquinolines)
RN 203522-41-2 HCAPLUS
CN Benzamide, N-[2-[[1-[(3,4-dimethoxyphenyl)methyl]-6,7-dimethoxy-3-isoquinolinyl]amino]-2-oxoethyl]-4-nitro- (9CI) (CA INDEX NAME)



RN 203522-43-4 HCAPLUS
CN Benzamide, 4-amino-N-[2-[[1-[(3,4-dimethoxyphenyl)methyl]-6,7-dimethoxy-3-isoquinolinyl]amino]-2-oxoethyl]- (9CI) (CA INDEX NAME)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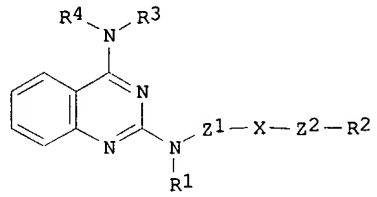
NH2
CH2
OMe
OMe

=> d bib abs hitstr 3

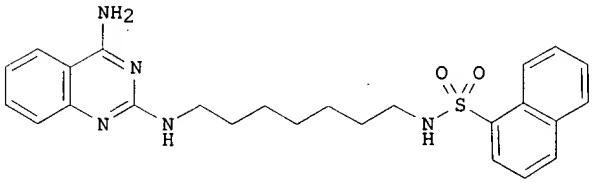
L37 ANSWER 3 OF 6 HCAPLUS COPYRIGHT 2001 ACS
AN 1997:480974 HCAPLUS
DN 127:95293
TI Quinazoline derivatives useful as antagonists of NPY receptor subtype Y5
IN Rueger, Heinrich; Schmidlin, Tibur; Rigollier, Pascal; Yamaguchi, Yasuchika; Tintelnot-Blomley, Marina; Schilling, Walter; Criscione, Leoluca; Stutz, Stefan
PA Novartis Ag, Switz.; Rueger, Heinrich; Schmidlin, Tibur; Rigollier, Pascal; Yamaguchi, Yasuchika; Tintelnot-Blomley, Marina; Schilling, Walter; Criscione, Leoluca; Stutz, Stefan
SO PCT Int. Appl., 110 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9720821	A1	19970612	WO 1996-EP5056	19961118
	W: AL, AU, BA, BB, BG, BR, CA, CN, CU, CZ, EE, GE, HU, IL, IS, JP, KP, KR, LC, LK, LR, LT, LV, MG, MK, MN, MX, NO, NZ, PL, RO, SG, SI, SK, TR, TT, UA, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	AU 9676926	A1	19970627	AU 1996-76926	19961118
	ZA 9610021	A	19970601	ZA 1996-10021	19961128
PRAI	US 1995-566024	A2	19951201		
	WO 1996-EP5056	W	19961118		

OS MARPAT 127:95293
GI



I



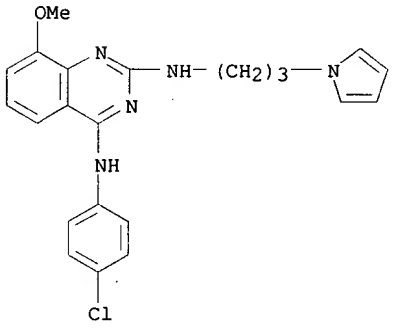
II

AB The invention relates to a method of treatment of disorders and diseases assocd. with NPY receptor subtype Y5. The method comprises administration of a therapeutically effective amt. of a compd. I or a salt thereof [wherein Z1, Z2 = bond, alkylene; R1 = H, alk(en/yn)yl, hydroxyalkyl, cycloalkyl, (hetero)aryl, etc.; R2 = H, halo, NO2, cyano, alk(en/yn)yl, (un)substituted NH2, or OH, CO2H or derivs., etc.; R3, R4 = H, (un)substituted alk(en/yn)yl, aryl, heteroaryl, etc.; or R3R4 = alkylene which may be hetero-atom-interrupted or benzo-fused; X = bond, CH:CH, C.tplbond.C, O, S, SO, SO2, CO or certain (hemi)ketals; benzo ring of quinazoline nucleus may be substituted]. Also claimed are compds. and pharmaceutical compns. For instance, condensation of 2-chloroquinazolin-4-ylamine with naphthalene-1-sulfonic acid (7-aminoheptyl)amide in isopentyl

alc. at 120.degree. gave title compd. II, isolated as the HCl salt. In food-deprived rats, II.HCl at 30 mg/kg i.p. gave a 57% inhibition of food intake over 24 h.

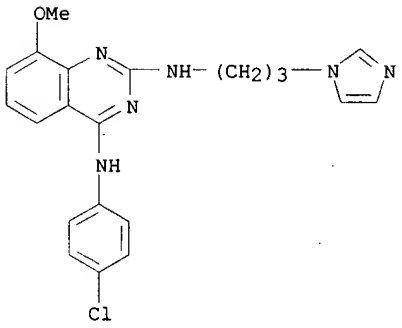
IT **192132-56-2P 192132-57-3P**
RL: BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of quinazoline derivs. as antagonists of NPY receptor subtype Y5)

RN 192132-56-2 HCAPLUS
CN 2,4-Quinazolinediamine, N4-(4-chlorophenyl)-8-methoxy-N2-[3-(1H-pyrrol-1-yl)propyl]-, monohydrochloride (9CI) (CA INDEX NAME)



● HCl

RN 192132-57-3 HCAPLUS
CN 2,4-Quinazolinediamine, N4-(4-chlorophenyl)-N2-[3-(1H-imidazol-1-yl)propyl]-8-methoxy-, monohydrochloride (9CI) (CA INDEX NAME)



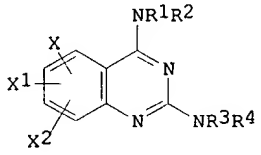
● HCl

=> d bib abs hitstr 4

L37 ANSWER 4 OF 6 HCAPLUS COPYRIGHT 2001 ACS
AN 1992:490317 HCAPLUS
DN 117:90317
TI Preparation of 2,4-diaminoquinazolines for enhancing antitumor activity
IN Coe, Jotham Wadsworth; Fliri, Anton Franz; Kaneko, Takushi; Larson, Eric Robert
PA Pfizer Inc., USA
SO PCT Int. Appl., 83 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9207844	A1	19920514	WO 1991-US7254	19911010
	W: AU, BR, CA, CS, DE, FI, HU, JP, KR, NO, PL, SU, US				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE				
	CA 2095213	AA	19920507	CA 1991-2095213	19911010
	AU 9190592	A1	19920526	AU 1991-90592	19911010
	AU 644035	B2	19931202		
	EP 556310	A1	19930825	EP 1992-900750	19911010
	EP 556310	B1	19950705		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
	JP 05507290	T2	19931021	JP 1992-501815	19911010
	HU 64533	A2	19940128	HU 1993-1314	19911010
	BR 9107070	A	19940531	BR 1991-7070	19911010
	ES 2074867	T3	19950916	ES 1992-900750	19911010
	CN 1061411	A	19920527	CN 1991-108479	19911105
	ZA 9108767	A	19930505	ZA 1991-8767	19911105
	NO 9301635	A	19930505	NO 1993-1635	19930505
	US 5444062	A	19950822	US 1993-50047	19930505
PRAI	US 1990-609986		19901106		
	WO 1991-US7254		19911010		

OS MARPAT 117:90317
GI



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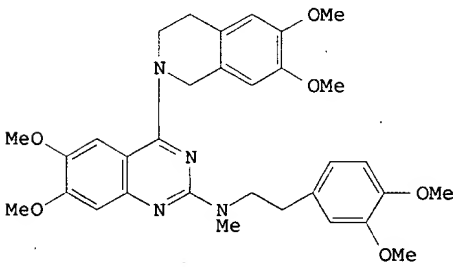


II

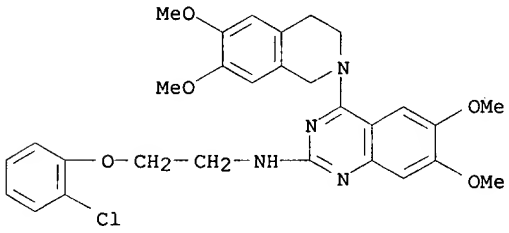
AB Title compds. [I; X, X1 = H, alkyl, alkoxy, Br, iodo, NO2, amino, Me2S+, aminomethyl, MeS, HOCH2, (substituted) benzoylamino, alkanoylamino, 4-methylpiperazino, morpholino, piperazino, pyrrolidino, etc.; X2 = H, alkyl, alkoxy; XX1 = ethylenedioxy, methylenedioxy; R1 = alkoxyalkyl, cycloalkyl, benzodioxan-2-ylmethyl; R2 = H, alkyl, PhCH2; R1R2 = (substituted) benzodiazepinyl, piperidino, decahydroisoquinol-2-yl, octahydroisoindol-2-yl, 1,2,3,4-tetrahydro-.beta.-carbol-2-yl; R3 =

cycloalkyl, benzodioxan-2-ylmethyl, (substituted) aralkyl, pyridylalkyl, alkoxyalkyl, indolylalkyl, tetrahydronaphthyl, indenyl, naphthyl, etc.; R4 = H, alkyl; R3R4N = (substituted) tetrahydroisoquinolyl, piperidino, piperazino], were prepd. as p-glycoprotein inhibitors to reverse multidrug resistance (no data). Thus, 2,4-dichloro-6,7-dimethoxyquinazoline, 1,2,3,4-tetrahydro-6,7-dimethoxyisoquinoline, and Et3N were stirred 16 h in dimethylacetamide to give 2-chloro-4-(1,2,3,4-tetrahydro-6,7-dimethoxyisoquinol-2-yl)-6,7-dimethoxyquinazoline. The latter was heated with N-methyl-3,4-dimethoxyphenethylamine in ethoxyethoxyethanol to give title compd. II.

IT **142715-77-3P 142715-78-4P 142715-80-8P**
142715-91-1P 142716-16-3P 142716-17-4P
142716-39-0P 142716-44-7P 142716-68-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, as P-glycoprotein inhibitor)

RN 142715-77-3 HCAPLUS

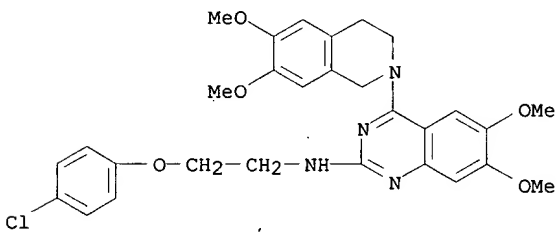
CN 2-Quinazolinamine, N-[2-(2-chlorophenoxy)ethyl]-4-(3,4-dihydro-6,7-dimethoxy-2(1H)-isoquinolinyl)-6,7-dimethoxy-, monohydrochloride (9CI) (CA INDEX NAME)



● HCl

RN 142715-78-4 HCAPLUS

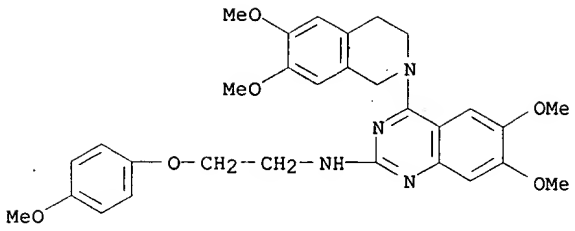
CN 2-Quinazolinamine, N-[2-(4-chlorophenoxy)ethyl]-4-(3,4-dihydro-6,7-dimethoxy-2(1H)-isoquinolinyl)-6,7-dimethoxy-, monohydrochloride (9CI) (CA INDEX NAME)



● HCl

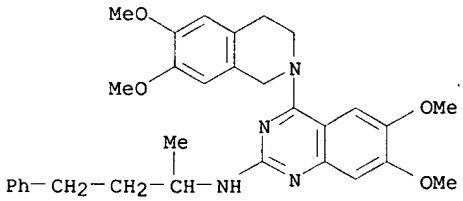
RN 142715-80-8 HCAPLUS

CN 2-Quinazolinamine, 4-(3,4-dihydro-6,7-dimethoxy-2(1H)-isoquinolinyl)-6,7-dimethoxy-N-[2-(4-methoxyphenoxy)ethyl]-, monohydrochloride (9CI) (CA INDEX NAME)



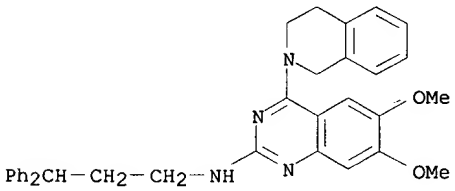
● HCl

RN 142715-91-1 HCAPLUS
CN 2-Quinazolinamine, 4-(3,4-dihydro-6,7-dimethoxy-2(1H)-isoquinolinyl)-6,7-dimethoxy-N-(1-methyl-3-phenylpropyl)-, monohydrochloride (9CI) (CA INDEX NAME)



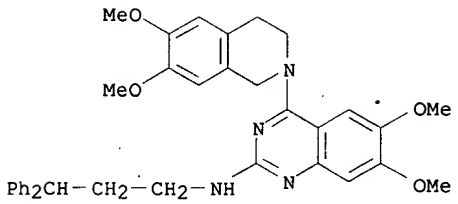
● HCl

RN 142716-16-3 HCAPLUS
CN 2-Quinazolinamine, 4-(3,4-dihydro-2(1H)-isoquinolinyl)-N-(3,3-diphenylpropyl)-6,7-dimethoxy-, monohydrochloride (9CI) (CA INDEX NAME)



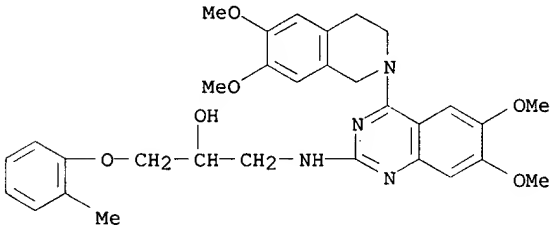
● HCl

RN 142716-17-4 HCAPLUS
CN 2-Quinazolinamine, 4-(3,4-dihydro-6,7-dimethoxy-2(1H)-isoquinolinyl)-N-(3,3-diphenylpropyl)-6,7-dimethoxy-, monohydrochloride (9CI) (CA INDEX NAME)



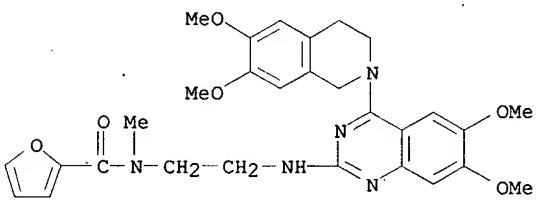
● HCl

RN 142716-39-0 HCAPLUS
CN 2-Propanol, 1-[[4-(3,4-dihydro-6,7-dimethoxy-2(1H)-isoquinolinyl)-6,7-dimethoxy-2-quinazolinyl]amino]-3-(2-methylphenoxy)-, monohydrochloride (9CI) (CA INDEX NAME)



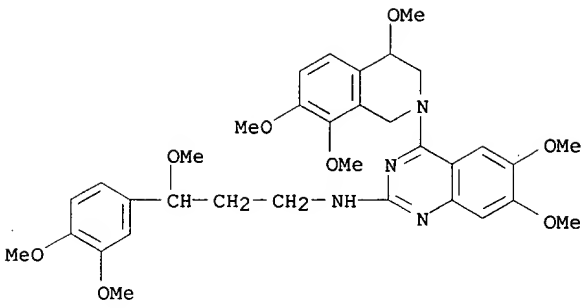
● HCl

RN 142716-44-7 HCAPLUS
CN 2-Furancarboxamide, N-[2-[[4-(3,4-dihydro-6,7-dimethoxy-2(1H)-isoquinolinyl)-6,7-dimethoxy-2-quinazolinyl]amino]ethyl]-N-methyl-, monohydrochloride (9CI) (CA INDEX NAME)



● HCl

RN 142716-68-5 HCAPLUS
CN 2-Quinazolinamine, 4-(3,4-dihydro-4,7,8-trimethoxy-2(1H)-isoquinolinyl)-N-[3-(3,4-dimethoxyphenyl)-3-methoxypropyl]-6,7-dimethoxy- (9CI) (CA INDEX NAME)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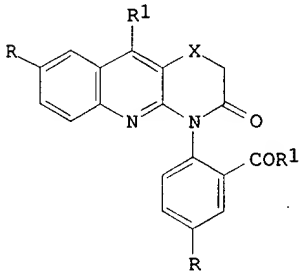
=> d bib abs hitstr 5

L37 ANSWER 5 OF 6 HCAPLUS COPYRIGHT 2001 ACS
AN 1977:584455 HCAPLUS
DN 87:184455
TI Heterocycles from 2-amino ketones. XXIII. Reaction of o-amino ketones with dicarboxylic acids
AU Kempter, G.; Rehbaum, D.; Schirmer, J.
CS Sekt. Chem./Biol., Paedagog. Hochsch. "Karl Liebknecht", Potsdam, E. Ger.
SO J. Prakt. Chem. (1977), 319(4), 589-600
CODEN: JPCEAO
DT Journal
LA German
GI



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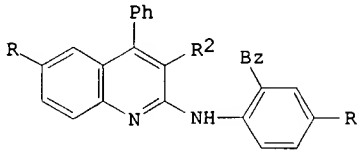
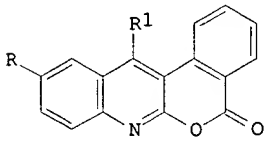
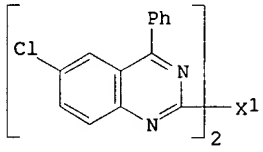


II



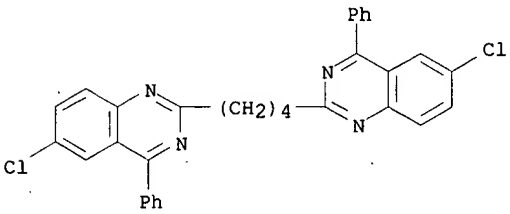
III



IV

AB Condensed quinolines I (X = CH2, S, O; R = H, Cl, Me; R1 = Ph, 4-MeC6H4) were obtained by condensing aminobenzophenones 4,2-R(R1CO)C6H3NH2 with (HO2CCH2)2X. Reaction of HO2C(CH2)n+1CO2H (n = 3, 4, 7) or o-HO2CC6H4CH2CH2CO2H with 4,2-RBzC6H3NH2 (R = H, Cl, Br, NO2) gave II [R2 = (CH2)nCO2H, o-CH2C6H4OC2H]. III were similarly obtained with homophthalic acid. Reaction of acid chlorides ClCOX1COCl [X1 = (CH2)m, CH2SCH2, CH2OCH2; m = 3, 4, 8] with 4,2-ClBzC6H3NH2 gave (4,2-ClBzC6H3NHCO)2X1 which cyclized to IV with NH3.

IT **64571-97-7P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
RN 64571-97-7 HCAPLUS
CN Quinazoline, 2,2'-(1,4-butanediyl)bis[6-chloro-4-phenyl- (9CI) (CA INDEX NAME)

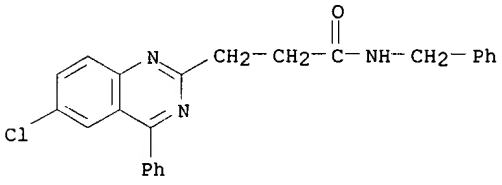


=> d bib abs hitstr 6

L37 ANSWER 6 OF 6 HCAPLUS COPYRIGHT 2001 ACS
AN 1971:498585 HCAPLUS
DN 75:98585
TI 2-Quinazolinepropionic acids and their derivatives
IN Bell, Stanley C.; Wei, Peter H. L.
PA American Home Products Corp.
SO U.S., 5 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3595861	A	19710727	US 1967-689009	19671208

GI For diagram(s), see printed CA Issue.
AB The title compds. (I, R1 = H, Cl; R2 = Ph, Me, o-ClC6H4; R3 = alkyl, alkoxy, OH, or substituted amino) and the related 5-hydroxy tetrahydropyrroloquinazolinones (II) were prepd. by refluxing III (X = halo) with an alkali metal oyanide. II were converted to I in mineral acid or base at 100.degree.. Thus, o-H2NC6H4Ac in CHCl3-NEt3 stirred with addn. of ClCH2CH2COCl and gave 75% III (X = Cl, R2 = Me, R1 = H). III (R1 = 4-Cl, R2 = Ph, X = Cl) (IV) in EtOH refluxed 18 hr with aq. KCN yielded I (R1 = Cl, R2 = Ph, R3 = OEt), hydrolyzed by heating in 10% NaOH on a steam bath to the free acid. The reaction of the quinazolinepropionic acid esters with amines gave the corresponding amides. IV and KCN in aq. MeOCH2CH2OMe refluxed 9 hr gave 5.8 g II (R1 = Cl, R2 = Ph), converted by heating in dil. aq. NaOH to I (R1 = Cl, R2 = Ph, R3 = OH).
IT **33389-70-7P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
RN 33389-70-7 HCAPLUS
CN 2-Quinazolinepropionamide, N-benzyl-6-chloro-4-phenyl- (8CI) (CA INDEX NAME)



=> d all

L44 ANSWER 1 OF 1 COPYRIGHT 2001 BEILSTEIN CDS MDLI

Beilstein Reg. No. (BRN): 4930498 Beilstein
Molecular Formula (MF): C34 H28 N4 . 2 I
Lin. Struct. Formula (LSF): C34H28N4(2+)*2I(1-)
Chemical Name (CN): 1,1'-dimethyl-4,4'-diphenyl-2,2'-buta-1,3-diene-t(?),t(?)-diyl-bis-quinazolinium; diiodide
1,1'-Dimethyl-4,4'-diphenyl-2,2'-buta-1,3-dien-t(?),t(?)-diyl-bis-chinazolinium; Dijodid
Beilstein Reference (SO): 4-26-00-01949
General Comments (NTE): Stereo compound

Component Data:

Component Reg. No. (CBRN)	Component Molec. Formula (CMF)	Formula Weight (FW)	Lawson Number (LN)
4924983	C34 H28 N4	492.62	30450, 2817
3587184	I	126.90	

Ring System Data:

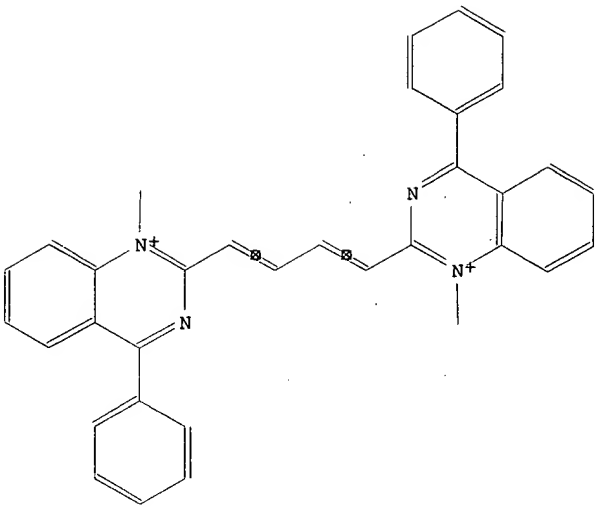
Component BRN (CBRN): 4924983
Number of Rings (CNR): 6
Ring Systems (CNRS): 4
Diff. Ring Systems (CNDRS): 2
Ring Heteros (CNRH): 4

Beilstein Ring Index (BRIX)	Ring System Formula (RF)	BRIX Count
10.2.6-2.7-5.1	C8N2	2
6.1.0-0.0-3.1	C6	2

Component BRN (CBRN): 3587184
Number of Rings (CNR): 0
Acyclic Heteros (CNAH): 1

CM 1

CBRN 4924983
CMF C34 H28 N4



CM 2

CBRN 3587184
CMF I

Preparation:
PRE
Start: 1,2-dimethyl-4-phenyl-quinazolinium iodide, glyoxal
Reference(s):
1. Hamer et al., J.Chem.Soc., 1932 251,257, CODEN: JCSOA9
Note(s):
2. Handbook Data

Crystal Property Description:
CPD braunrot
Reference(s):
1. Hamer et al., J.Chem.Soc., 1932 251,257, CODEN: JCSOA9
Note(s):
2. Handbook Data

Melting Point:

Value (MP) (Cel)	Ref.	Note
205.00	1	1, 2

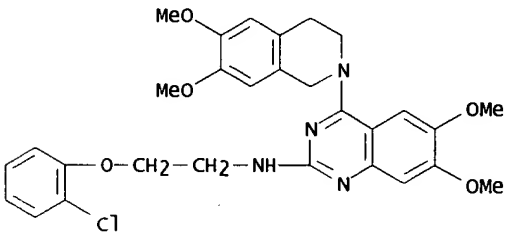
Reference(s):
1. Hamer et al., J.Chem.Soc., 1932 251,257, CODEN: JCSOA9

Notes(s):
1. Handbook Data
2. Decomp.

=> d bib abs hitstr

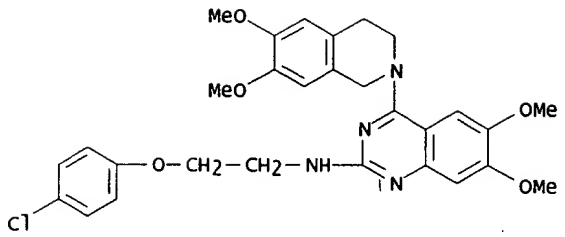
L15 ANSWER 1 OF 1 USPATFULL
AN 95:75971 USPATFULL
TI Quinazolines derivatives for enhancing antitumor activity
IN Coe, Jotham W., Mystic, CT, United States
Fliri, Anton F. J., Norwich, CT, United States
Kaneko, Takushi, Guilford, CT, United States
Larson, Eric R., Mystic, CT, United States
PA Pfizer Inc., New York, NY, United States (U.S. corporation)
PI US 5444062 19950822
AI US 1993-50047 19930505 (8)
WO 1991-US7254 19911010
19930505 PCT 371 date
19930505 PCT 102(e) date
RLI Continuation of Ser. No. US 1990-609986, filed on 6 Nov 1990, now abandoned
DT Utility
EXNAM Primary Examiner: Shah, Mukund J.; Assistant Examiner: Grumbling, Matthew V.
LREP Richardson, Peter C.Benson Gregg C.
CLMN Number of Claims: 27
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 1512
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB 2,4-Diaminoquinazoline derivatives as potentiators of chemotherapeutic agents in the treatment of cancer.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT 142715-77-3P 142715-78-4P 142715-80-8P
142715-91-1P 142716-16-3P 142716-17-4P
142716-68-5P
(prepn. of, as P-glycoprotein inhibitor)
RN 142715-77-3 USPATFULL
CN 2-Quinazolinamine, N-[2-(2-chlorophenoxy)ethyl]-4-(3,4-dihydro-6,7-dimethoxy-2(1H)-isoquinolinyl)-6,7-dimethoxy-, monohydrochloride (9CI) (CA INDEX NAME)



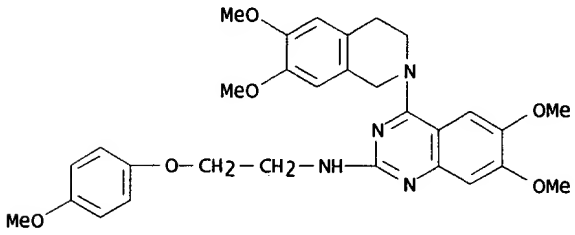
● HCl

RN 142715-78-4 USPATFULL
CN 2-Quinazolinamine, N-[2-(4-chlorophenoxy)ethyl]-4-(3,4-dihydro-6,7-dimethoxy-2(1H)-isoquinolinyl)-6,7-dimethoxy-, monohydrochloride (9CI) (CA INDEX NAME)



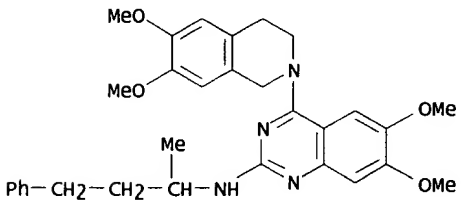
● HCl

RN 142715-80-8 USPATFULL
CN 2-Quinazolinamine, 4-(3,4-dihydro-6,7-dimethoxy-2(1H)-isoquinolinyl)-6,7-dimethoxy-N-[2-(4-methoxyphenoxy)ethyl]-, monohydrochloride (9CI) (CA INDEX NAME)



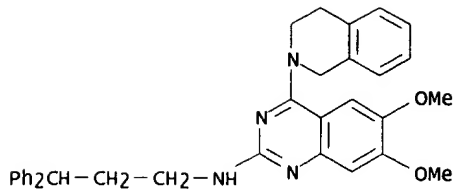
● HCl

RN 142715-91-1 USPATFULL
CN 2-Quinazolinamine, 4-(3,4-dihydro-6,7-dimethoxy-2(1H)-isoquinolinyl)-6,7-dimethoxy-N-(1-methyl-3-phenylpropyl)-, monohydrochloride (9CI) (CA INDEX NAME)



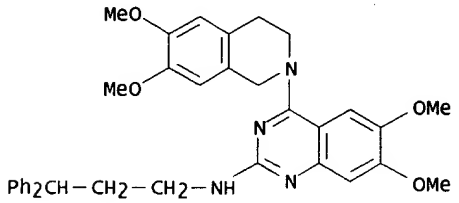
● HCl

RN 142716-16-3 USPATFULL
CN 2-Quinazolinamine, 4-(3,4-dihydro-2(1H)-isoquinolinyl)-N-(3,3-diphenylpropyl)-6,7-dimethoxy-, monohydrochloride (9CI) (CA INDEX NAME)



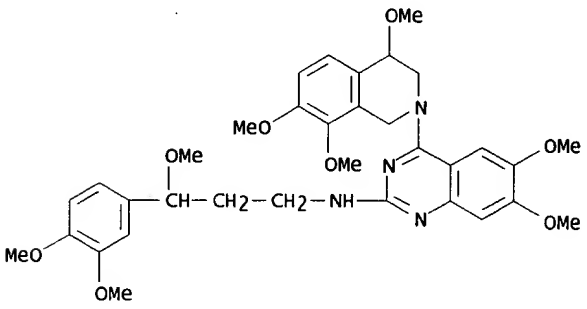
● HCl

RN 142716-17-4 USPATFULL
CN 2-Quinazolinamine, 4-(3,4-dihydro-6,7-dimethoxy-2(1H)-isoquinolinyl)-N-(3,3-diphenylpropyl)-6,7-dimethoxy-, monohydrochloride (9CI) (CA INDEX NAME)



● HCl

RN 142716-68-5 USPATFULL
CN 2-Quinazolinamine, 4-(3,4-dihydro-4,7,8-trimethoxy-2(1H)-isoquinolinyl)-N-[3-(3,4-dimethoxyphenyl)-3-methoxypropyl]-6,7-dimethoxy- (9CI) (CA INDEX NAME)



=> d bib abs hitstr 1

L8 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2001 ACS
AN 1992:490317 HCAPLUS
DN 117:90317
TI Preparation of 2,4-diaminoquinazolines for enhancing antitumor activity
IN Coe, Jotham Wadsworth; Fliri, Anton Franz; Kaneko, Takushi; Larson, Eric Robert
PA Pfizer Inc., USA
SO PCT Int. Appl., 83 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9207844	A1	19920514	WO 1991-US7254	19911010
	W: AU, BR, CA, CS, DE, FI, HU, JP, KR, NO, PL, SU, US				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE				
	CA 2095213	AA	19920507	CA 1991-2095213	19911010
	AU 9190592	A1	19920526	AU 1991-90592	19911010
	AU 644035	B2	19931202		
	EP 556310	A1	19930825	EP 1992-900750	19911010
	EP 556310	B1	19950705		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
	JP 05507290	T2	19931021	JP 1992-501815	19911010
	HU 64533	A2	19940128	HU 1993-1314	19911010
	BR 9107070	A	19940531	BR 1991-7070	19911010
	ES 2074867	T3	19950916	ES 1992-900750	19911010
	CN 1061411	A	19920527	CN 1991-108479	19911105
	ZA 9108767	A	19930505	ZA 1991-8767	19911105
	NO 9301635	A	19930505	NO 1993-1635	19930505
	US 5444062	A	19950822	US 1993-50047	19930505
PRAI	US 1990-609986		19901106		
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OS MARPAT 117:90317
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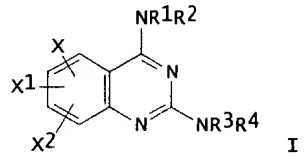

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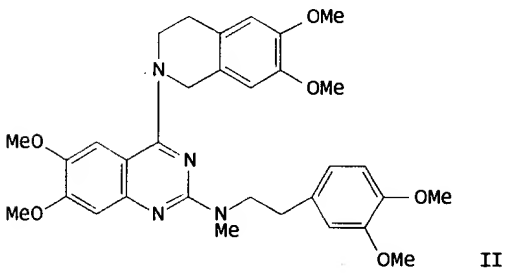


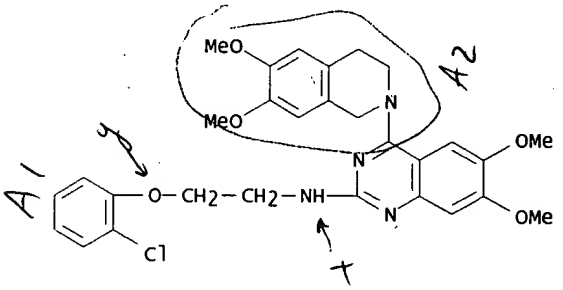
II

AB Title compds. [I; X, X1 = H, alkyl, alkoxy, Br, iodo, NO2, amino, Me2S+, aminomethyl, MeS, HOCH2, (substituted) benzoylamino, alkanoylamino, 4-methylpiperazino, morpholino, piperazino, pyrrolidino, etc.; X2 = H, alkyl, alkoxy; XX1 = ethylenedioxy, methylenedioxy; R1 = alkoxyalkyl, cycloalkyl, benzodioxan-2-ylmethyl; R2 = H, alkyl, PhCH2; R1R2 = (substituted) benzodiazepinyl, piperidino, decahydroisoquinol-2-yl, octahydroisoindol-2-yl, 1,2,3,4-tetrahydro-.beta.-carbol-2-yl; R3 = cycloalkyl, benzodioxan-2-ylmethyl, (substituted) aralkyl, pyridylalkyl, alkoxyalkyl, indolylalkyl, tetrahydronaphthyl, indenyl, naphthyl, etc.; R4 = H, alkyl; R3R4N = (substituted) tetrahydroisoquinolyl, piperidino, piperazino], were prepd. as p-glycoprotein inhibitors to reverse multidrug

resistance (no data). Thus, 2,4-dichloro-6,7-dimethoxyquinazoline, 1,2,3,4-tetrahydro-6,7-dimethoxyisoquinoline, and Et3N were stirred 16 h in dimethylacetamide to give 2-chloro-4-(1,2,3,4-tetrahydro-6,7-dimethoxyisoquinol-2-yl)-6,7-dimethoxyquinazoline. The latter was heated with N-methyl-3,4-dimethoxyphenethylamine in ethoxyethoxyethanol to give title compd. II.

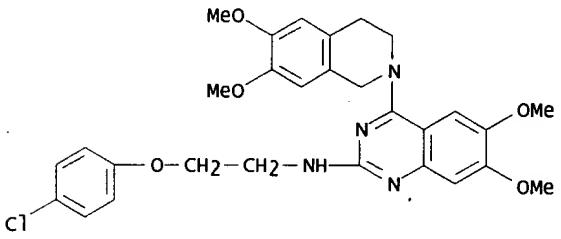
IT 142715-77-3P 142715-78-4P 142715-80-8P
142715-91-1P 142716-16-3P 142716-17-4P
142716-68-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, as P-glycoprotein inhibitor)

RN 142715-77-3 HCAPLUS
CN 2-Quinazolinamine, N-[2-(2-chlorophenoxy)ethyl]-4-(3,4-dihydro-6,7-dimethoxy-2(1H)-isoquinolinyl)-6,7-dimethoxy-, monohydrochloride (9CI) (CA INDEX NAME)



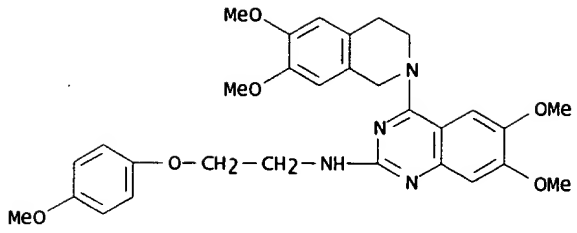
● HCl

RN 142715-78-4 HCAPLUS
CN 2-Quinazolinamine, N-[2-(4-chlorophenoxy)ethyl]-4-(3,4-dihydro-6,7-dimethoxy-2(1H)-isoquinolinyl)-6,7-dimethoxy-, monohydrochloride (9CI) (CA INDEX NAME)



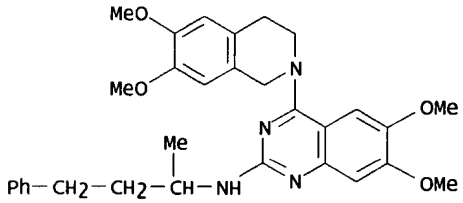
● HCl

RN 142715-80-8 HCAPLUS
CN 2-Quinazolinamine, 4-(3,4-dihydro-6,7-dimethoxy-2(1H)-isoquinolinyl)-6,7-dimethoxy-N-[2-(4-methoxyphenoxy)ethyl]-, monohydrochloride (9CI) (CA INDEX NAME)



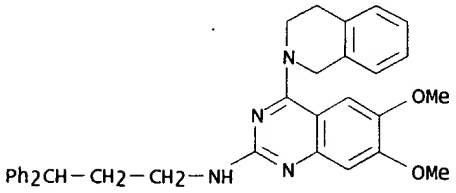
● HCl

RN 142715-91-1 HCAPLUS
CN 2-Quinazolinamine, 4-(3,4-dihydro-6,7-dimethoxy-2(1H)-isoquinolinyl)-6,7-dimethoxy-N-(1-methyl-3-phenylpropyl)-, monohydrochloride (9CI) (CA INDEX NAME)



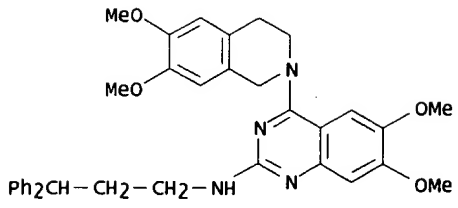
● HCl

RN 142716-16-3 HCAPLUS
CN 2-Quinazolinamine, 4-(3,4-dihydro-2(1H)-isoquinolinyl)-N-(3,3-diphenylpropyl)-6,7-dimethoxy-, monohydrochloride (9CI) (CA INDEX NAME)



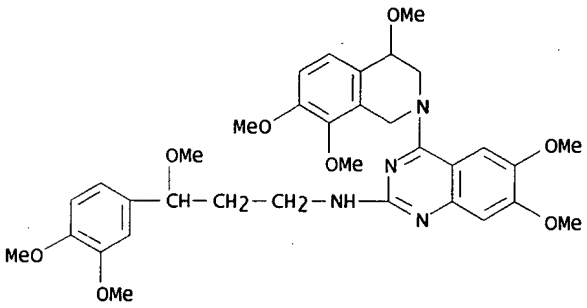
● HCl

RN 142716-17-4 HCAPLUS
CN 2-Quinazolinamine, 4-(3,4-dihydro-6,7-dimethoxy-2(1H)-isoquinolinyl)-N-(3,3-diphenylpropyl)-6,7-dimethoxy-, monohydrochloride (9CI) (CA INDEX NAME)



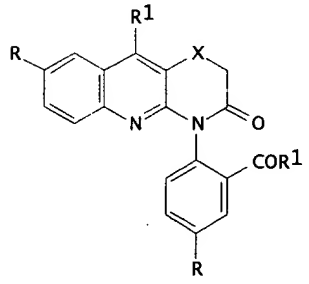
● HCl

RN 142716-68-5 HCAPLUS
CN 2-Quinazolinamine, 4-(3,4-dihydro-4,7,8-trimethoxy-2(1H)-isoquinolinyl)-N-[3-(3,4-dimethoxyphenyl)-3-methoxypropyl]-6,7-dimethoxy- (9CI) (CA INDEX NAME)



=> d bib abs hitstr 2

L8 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2001 ACS
AN 1977:584455 HCAPLUS
DN 87:184455
TI Heterocycles from 2-amino ketones. XXIII. Reaction of o-amino ketones with dicarboxylic acids
AU Kempter, G.; Rehbaum, D.; Schirmer, J.
CS Sekt. Chem./Biol., Paedagog. Hochsch. "Karl Liebknecht", Potsdam, E. Ger.
SO J. Prakt. Chem. (1977), 319(4), 589-600
CODEN: JPCEAO
DT Journal
LA German
GI



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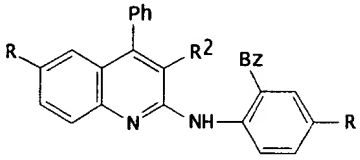

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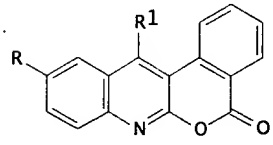

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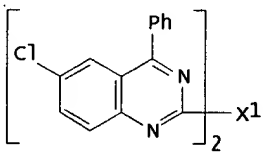
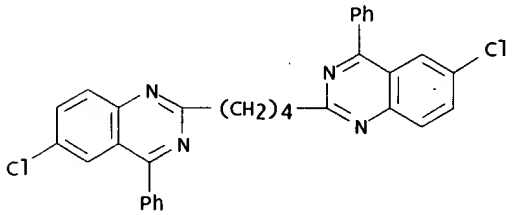


IV

AB Condensed quinolines I (X = CH2, S, O; R = H, Cl, Me; R1 = Ph, 4-MeC6H4) were obtained by condensing aminobenzophenones 4,2-R(R1CO)C6H3NH2 with (HO2CCH2)2X. Reaction of HO2C(CH2)n+1CO2H (n = 3, 4, 7) or o-HO2CC6H4CH2CH2CO2H with 4,2-RBzC6H3NH2 (R = H, Cl, Br, NO2) gave II [R2 = (CH2)nCO2H, o-CH2C6H4OC2H]. III were similarly obtained with homophthalic acid. Reaction of acid chlorides ClCOX1COCl [X1 = (CH2)m, CH2SCH2, CH2OCH2; m = 3, 4, 8] with 4,2-ClBzC6H3NH2 gave (4,2-ClBzC6H3NHCO)2X1 which cyclized to IV with NH3.
IT 64571-97-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
RN 64571-97-7 HCAPLUS
CN Quinazoline, 2,2'-(1,4-butanediyl)bis[6-chloro-4-phenyl- (9CI) (CA INDEX NAME)



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L14 ANSWER 1 OF 1 COPYRIGHT 2001 BEILSTEIN CDS MDLI

Beilstein Reg. No. (BRN): 4930498 Beilstein
Molecular Formula (MF): C34 H28 N4 . 2 I
Lin. Struct. Formula (LSF): C34H28N4(2+)*2I(1-)
Chemical Name (CN): 1,1'-dimethyl-4,4'-diphenyl-2,2'-buta-1,3-diene-t(?),t(?)-diyl-bis-quinazolinium; diiodide
1,1'-Dimethyl-4,4'-diphenyl-2,2'-buta-1,3-dien-t(?),t(?)-diyl-bis-chinazolinium; Dijodid
Beilstein Reference (SO): 4-26-00-01949
General Comments (NTE): Stereo compound

Component Data:

Component Reg. No. (CBRN)	Component Molec. Formula (CMF)	Formula Weight (FW)	Lawson Number (LN)
4924983	C34 H28 N4	492.62	30450, 2817
3587184	I	126.90	

Ring System Data:

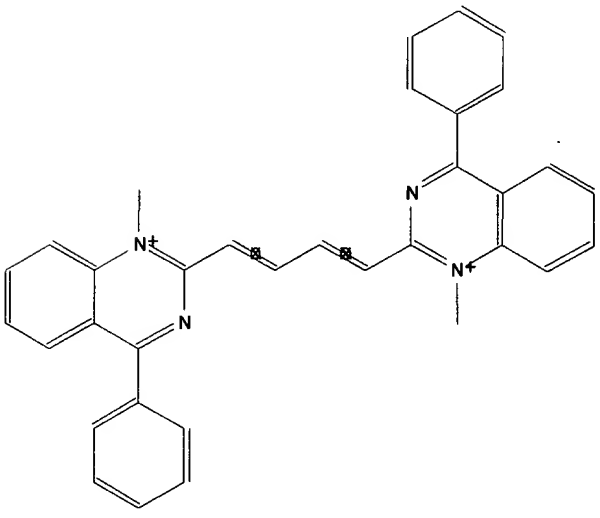
Component BRN (CBRN): 4924983
Number of Rings (CNR): 6
Ring Systems (CNRS): 4
Diff. Ring Systems (CNDRS): 2
Ring Heteros (CNRH): 4

Beilstein Ring Index (BRIX)	Ring System Formula (RF)	BRIX Count
10.2.6-2.7-5.1	C8N2	2
6.1.0-0.0-3.1	C6	2

Component BRN (CBRN): 3587184
Number of Rings (CNR): 0
Acyclic Heteros (CNAH): 1

CM 1

CBRN 4924983
CMF C34 H28 N4



CM 2

CBRN 3587184
CMF I

Preparation:
PRE
Start: 1,2-dimethyl-4-phenyl-quinazolinium iodide, glyoxal
Reference(s):
1. Hamer et al., J.Chem.Soc., 1932 251,257, CODEN: JCSOA9
Note(s):
2. Handbook Data

Crystal Property Description:
CPD braunrot
Reference(s):
1. Hamer et al., J.Chem.Soc., 1932 251,257, CODEN: JCSOA9
Note(s):
2. Handbook Data

Melting Point:

Value (MP) (Cel)	Ref.	Note
205.00	1	1, 2

Reference(s):
1. Hamer et al., J.Chem.Soc., 1932 251,257, CODEN: JCSOA9

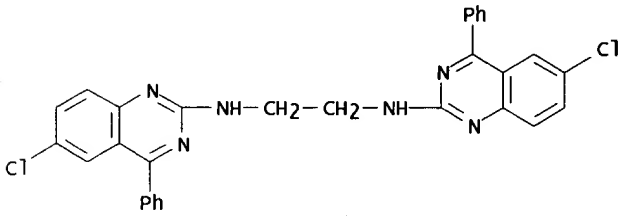
Notes(s):
1. Handbook Data
2. Decomp.

=> d all hitstr

L9 ANSWER 1 OF 1 CAOLD COPYRIGHT 2001 ACS
AN CA64:2106b CAOLD
TI 5,6,7,8-tetrahydroquinazolinium iodides
AU Carney, Richard W. J.; Blatter, H. M.; De Stevens, G.
PA CIBA Ltd.
DT Patent

PATENT NO.	KIND	DATE
BE 660902		

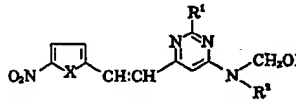
IT 2193-30-8 5021-54-5 5021-71-6 5021-72-7 5021-74-9 5083-03-4
5093-28-7 5185-13-7 5185-14-8 5185-16-0 5185-17-1
5185-18-2 5185-19-3 5185-20-6 5185-22-8 5185-26-2 5185-27-3
5185-28-4 5185-29-5 5185-31-9 5185-32-0 5185-33-1 5185-34-2
5185-35-3 5185-36-4 5185-37-5 5185-38-6 5185-39-7 5234-80-0
5234-81-1 5260-36-6 5260-37-7 5260-38-8 5260-39-9 5502-44-3
5502-50-1 5567-27-1 5567-28-2 5991-42-4 7595-02-0 102496-13-9
IT 5185-13-7
RN 5185-13-7 CAOLD
CN Quinazoline, 2,2'-(ethylenediimino)bis[6-chloro-4-phenyl- (7CI, 8CI) (CA INDEX NAME)



5-nitrofurfural and 1.24 g. 2,4-dimethyl-6-hydroxypyrimidine is heated in 3 g. Ac_2O at 110° for 3 hrs. to give 1.5 g. I (R^1 = Me, R^2 = OH, R^3 = H), m. 255° (decompn.). Similarly prepd. are the following I (R^1, R^2, R^3, and m.p. (decompn. point is given in brackets) given): Me, OH, H, (255°); Me, OMe, H, 202–4°; Me, NH_2, H, (218–19°); Me, OEt, H, 207–9°; Me, OH, Me, (265–7°). Hiroshi Kataoka *a*

Thiosemicarbazone or semicarbazone of barbituric acid. State Medical Institute, Grodno (by V. M. Vvedenskii, V. G. Ponomarenko, and M. P. Makukha). U.S.S.R. 174,630 (Cl. C 07*d*), Sept. 7, 1965, Appl. June 22, 1964. The title compds. are obtained by the interaction of barbituric acid with thiosemicarbazide or semicarbazide with boiling. From *Byul. Izobret. i Tovarnykh Znakov* 1965(18), 27. NSCL

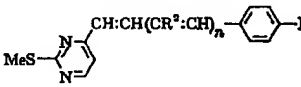
5-Nitrofuryl(or thienyl)vinylhydroxymethylaminopyrimidine derivatives. Dainippon Pharmaceutical Co., Ltd. (by Shinsaku Minami, Akio Fujita, Junichi Matsumoto, Katsuro Fujimoto, and Yoshiyuki Takase). Japan. 20,869('65), Sept. 16, Appl. April 3, 1964; 2 pp. Manuf. of I, useful as bactericide and fungicide, was described. Thus, 1 g. 4-[2-(5-nitro-2-furyl)vinyl]-2-methyl-6-aminopyrimidine is heated at 80° for 2 hrs. in a mixt. of 10 ml. 37% formaline and 3 ml. EtOH, cooled, H_2O added *b*



(I)

thereto, and the sepd. mass is recrystd. from Me_2CO to give 0.5 g. I (X = O, R^1 = Me, R^2 = H), m. 242–5° (decompn.). Similarly prepd. are the following I (X, R^1, R^2, and decompn. point given): O, H, H, 200° (dil. EtOH); S, Me, H, 216–19° (Me_2CO); S, H, CH_2OH, 237–9° (Me_2CO). Hiroshi Kataoka *c*

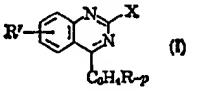
Pyrimidine derivatives. Toyama Chemical Industry Co., Ltd. (by Isamu Saikawa and Toshiko Wada). Japan. 20,978('65), Sept. 17, Appl. June 23, 1964; 2 pp. Manuf. of I, useful



(I)

as antivirus drug for polio virus, was described. Thus, a soln. of 4 g. 2-methylthio-4-methylpyrimidine in 15 ml. AcOH is heated at 50–5° with 7.5 g. concd. H_2SO_4 and 5.3 g. *p*-bromobenzaldehyde for 165 min., the pptd. mass is suspended in H_2O, and made alk. to give 7.1 g. I (R^1 = Br, n = 0), pale yellow prisms, m. 163–4° (MeOH). Similarly prepd. are the following I (R^1, n, R^2, appearance, m.p., and % yield given): Cl, 0, —, pale yellow prisms, 149–9.5°, 81.4; Me, 0, —, pale yellow, 97–100°, 69.6; Cl, 1, H, needles, 113°, 48.8; Ph, 1, H, yellow needles, 76°, 63.9. Hiroshi Kataoka *d*

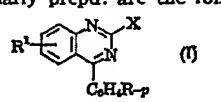
2-Haloquinazoline derivatives. Fujisawa Pharmaceutical Co., Ltd. (by Yoritaro Haraoka, Takashi Kamiya, Kazuo Kariyone, and Hisatoyo Yazawa). Japan. 20,865('65), Sept. 16, Appl. Dec. 18, 1963; 2 pp. Manuf. of I was described. Thus, 0.4 g. 4-phenyl-6-methoxy-2(1*H*)-quinazolinone is refluxed in 4 g. $POCl_3$ for 30 min., the whole mass evapd., the residue poured into iced H_2O, and neutralized with 10% NaOH soln. to give 0.35 g. I (R = H, R′ = 6-OMe), m. 147.5–8.5° (95% EtOH). Similarly prepd. are the following I (X = Cl) (R, R′, and m.p. given): H, 7-Cl, 116–18°; H, 5-Cl, 126.5–7°; H, 6-Cl, 159–60°; *e*



(I)

H, 6-Me 135–6°; OMe, 6-Cl, 177–8°; H, 6,7-di-OMe, 217–18°. I are intermediates for the manuf. of sedative drug. Cf. following abstracts. Hiroshi Kataoka

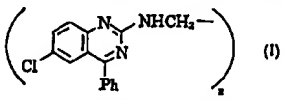
2-Aminoquinazoline derivatives. Fujisawa Pharmaceutical Co., Ltd. (by Yoritaro Haraoka, Takashi Kamiya, Kazuo Kariyone, and Hisatoyo Yazawa). Japan. 20,866('65), Sept. 16, Appl. Dec. 18, 1963; 3 pp. Manuf. of I, useful as sedatives, by aminolysis of the corresponding 2-Cl analog of I (cf. the preceding abstr.), was described. Thus, to a soln. of 0.25 g. 2-chloro-4-phenyl-6-methoxyquinazoline in 5 cc. 95% EtOH is added 5 cc. 30% aq. $MeNH_2$ soln. and the whole mass heated in a sealed tube at 60–75° for 3 hrs. to give 0.2 g. I (X = NHMe, R = H, R^1 = 6-OMe), yellowish green needles, m. 170–1.5° (95% EtOH). Similarly prepd. are the following I (X, R, R^1 — *g*



(I)

appearance, and m.p. given): NHMe, H, 7-Cl, yellowish green needles, 159.5–60.5°; NHMe, H, 5-Cl, yellowish green needles, 174–6°; NMe_2, H, 6-Cl, —, 138–9° (EtOH); PhNH, H, 6-Cl, —, 132–3° (EtOH); NHMe, H, 6-Cl, —, 182–3° (EtOH); (2-aminoethyl)amino, H, 6-Cl, —, 151–2° (EtOH); (2-diethylaminoethyl)amino, H, 6-Cl, —, —; NHMe, H, 6-Me, —, 165–6° (EtOH); NHMe, OMe, 6-Cl, —, 165–8°. Also prepd. was 2-methylamino-4-(*p*-methoxyphenyl)-6,7-dimethoxyquinazoline, m. 160–2°. Cf. following abstr. Hiroshi Kataoka *h*

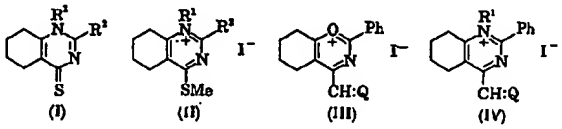
2,2′-(Alkylenediamino)diquinazolines. Fujisawa Pharmaceutical Co., Ltd. (by Yoritaro Haraoka, Takashi Kamiya, Kazuo Kariyone, and Hisatoyo Yazawa). Japan. 20,867('65), Sept. 16, Appl. Dec. 18, 1963; 2 pp. 2,6-Dichloro-4-phenylquinazoline (4.5 g.) in 50 cc. EtOH is refluxed for 1 hr. with 15 g. ethylenediamine, and concd. *in vacuo*. To the residual oil is added



(I)

EtOH to give 0.4 g. 6,6′-dichloro-2,2′-(dimethylenediamino)-diquinazoline (I), m. 241–2°, useful as a sedative drug. Cf. preceding abstr. Hiroshi Kataoka *i*

5,6,7,8-Tetrahydroquinazolinium iodides. CIBA Ltd. (by Richard W. J. Carney, Herbert M. Blatter, and George De Stevens). Belg. 660,902, Sept. 10, 1965; U.S. Appl. March 11, 1964; 60 pp. Action of MeI on 1,4,5,6,7,8-hexahydroquinazoline-4-thiones (I) gives title compds. of structure II; action of amines on 5,6,7,8-tetrahydro-1,3-benzoxazinium iodides (III) gives title compds. of structure IV, in which R^1 and R^2 are alkyl or aryl and Q is a heterocyclic moiety. Addn. under N of 55 g.



(I) (II) (III) (IV)

1-(4-morpholino)cyclohexene (V) in 45 cc. $CHCl_3$ to a chilled soln. of 107 g. BzNCS (VI) during 1 hr., refluxing 30 min., and keeping overnight gave 2-phenyl-5,6,7,8-tetrahydro-1,3-benzoxazine-4-thione (VII), m. 197–9° (Me_2NCHO), 5 g. of which was converted to I (R^1 = R^2 = Ph) (Ia), m. 265–7° (EtOH), by refluxing 1 hr. in 15 g. $PhNH_2$. VI and 1-anilinocyclohexene in Et_2O gave orange *N*-(*N*-phenyl-3,4,5,6-tetrahydrothionanthraniloyl)benzamide, m. 85–7°, which gave Ia in refluxing tetrahydrofuran. A mixt. of 6.2 g. Ia, 2.8 g. MeI, and 200 cc. Me_2CO was refluxed 2 hrs., giving a yellow ppt. of II (R^1 = R^2 = Ph) (IIa), m. 261–3° (Me_2CO). I (R^1 = *n*-decyl, R^2 = Ph) (Ib), m. 155–6° (EtOH), from VII and *n*-$C_{10}H_{21}NH_2$, gave II (R^1 = *n*-decyl, R^2 = Ph) (IIb), viscous oil. VII (5 g.), 9 g. 4-$FC_6H_4NH_2$, and 50 cc. EtOH refluxed 4 hrs., gave yellow I (R^1 = 4-FC_6H_4, R^2 = Ph) (Ic), m. 307–10° (EtOH), 4.1 g. of which with 1.7 g. MeI refluxed 4 hrs. gave II (R^1 = 4-FC_6H_4, R^2 = Ph) (IIc), m. 257–8° (Me_2CO). Treatment of 4-FC_6H_4N:CClC$_6H_4$Me-4 [m. 88–91° (Et_2O–C_6H_{12})], (5.6 g.) and 7.45 g. $Pb(SCN)_2$ in 50 cc. C_6H_6 2 hrs. gave 4-FC_6H_4N:C(NCS)C_6H_4Me-4, m. 77–9° (C_5H_{12}). This product (2.7 g.) treated with 1.67 g. V in 10 cc. dioxane gave I (R^1 = 4-FC_6H_4, R^2 = 4-MeC_6H_4) (Id), m. 291–3° (Me_2CO). Id gave II (R^1 = 4-FC_6H_4, R^2 = 4-MeC_6H_4) (IId). Similarly prepd. were: 4-FC_6H_4N:CClC$_6H_4$Cl-4, m. 78–80° (C_6H_{12}); 4-FC_6H_4N:-C(CNS)C_6H_4Cl-4, m. 85–7° (C_5H_{12}); I (R^1 = 4-FC_6H_4, R^2 = 4-ClC_6H_4) (Ie), m. 300° (Me_2CO); and II (R^1 = 4-FC_6H_4, R^2 = 4-ClC_6H_4) (IIe); 4-FC_6H_4N:CClC$_6H_4$OMe-4, 4-FC_6H_4N:C-(CNS)C_6H_4OMe-4; I (R^1 = 4-FC_6H_4, R^2 = 4-$MeOC_6H_4$) (If); and II (R^1 = 4-FC_6H_4, R^2 = 4-$MeOC_6H_4$) (IIf). A mixt. of 5 g. VII, 4.5 g. MeI, and 80 cc. Me_2O refluxed 1 hr. gave 4-methylthio-2-phenyl-5,6,7,8-tetrahydro-1,3-benzoxazinium iodide (VIII), m. 183° (decompn.), which, on treatment with 2-methylbenzothiazole methiodide (IX) in EtOH containing Et_3N, gave III (Q = 3-methyl-2(3*H*)-benzothiazolylidene) (IIIa), m. 313–14° (MeOH). Treatment of IIIa with R^1NH_2 under reflux gave IV as follows (R^1 and m.p. given): Ph, 312–14° (EtOH); 4-FC_6H_4, 271–2° (EtOH); $Et_2NCH_2CH_2$, 194–6° (EtOH); Pr, 245–6° (EtOH); $Me_2NCH_2CH_2$, 228–30° (MeOH); 3-pyridyl, 266–7° (MeOH); and 4-$Me_2NC_6H_4$, m. 314–15° (MeOH). VIII and 2-quinaldine ethiodide gave III (Q = 1-ethyl-2(1*H*)-quinolylidene) (IIIb), m. 256–8° (decompn.), from which was prepd. IV (R^1 = 4-FC_6H_4) (IVb), 252–3° (EtOH). III (Q = 1-methyl-2(1*H*)-quinolylidene) (IIIc) gave IV (R^1 = 4-FC_6H_4) (IVc), m. 220–3°. IIb (3 g.) and 2.25 g. IX in 50 cc. EtOH containing a few drops Et_3N refluxed overnight gave IV (R^1 = *n*-decyl) (IVa), m. 214–15° (EtOH). A mixt. of 10 g. 2-methylbenzoxazole and 17 g. BuI was heated at 150° in a sealed tube 48 hrs., giving 3-butyl-2-methylbenzoxazolinium iodide, m. 147–50° (EtOH), which reacted with VIII to give III (Q = 3-butyl-2(3*H*)-benzoxazolylidene) (IIId), m. 260°. IIId and *n*-$C_{10}H_{21}NH_2$ gave IV (R^1 = *n*-decyl) (IVd), m. 75° (*iso*-PrOH). Other 2-methylbenzoxazolium iodides were prepd. with the following 3-substituents: Me, m. 199–200°; Et, m. 195–7°; Pr, m. 194–6°. The 3-Me deriv. gave III (Q = 3-methyl-2(3*H*)-benzoxazolylidene) (IIIe), m. 269°, from which was prepd. IV (R^1 = *n*-decyl) (IVe), m. 190–91° (iso-PrOH). From the 3-Et deriv. were prepd. the following IV (Q = 3-ethyl-2(3*H*)-benzoxazolylidene) (IVf): R^1 = *n*-$C_{11}H_{23}$, m. 181–3° (iso-PrOH); R^1 = *n*-octyl, m. 223–5° (iso-PrOH); and *j*